THE BUILDER

A JOURNAL FOR THE ARCHITECT AND FOR ALL INTERESTED IN THE CONSTRUCTIVE AND DECORATIVE ARTS.

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REFLECTIONS ON CHARACTER.

THE opening years of the present century have witnessed a considerable modification of the theory so prevalent in the last one, that the artist's first duty is to express his personality in his work. Not that personality is no longer valued. On the contrary, the importance of cultivating the architect's personality is insisted on more strongly than ever, but different ideas seem now to prevail as to the part which it should play in the creation of a building. It is beginning to be more clearly recognised that a building has other functions to perform than that of acting solely as a medium for the expression of its designer's personality, and that these other functions may well claim some share in determining its appearance. Generally speaking, a more impersonal attitude appears to have been adopted lately, and the architect seems to betray a decided tendency to think less about himself and more about his work, less about his own feelings and abilities and more about the purpose and functions of his buildings.

Under the influence of this tendency he has been able to perceive that the purpose and nature of a building may invest it with a certain personality and character distinct from any arbitrary character which he may decide to impose upon it by way of expressing his own personality. He appears even to have gone so far as to ask himself whether it is not the first duty of the artist to express, not his own personality, but that of the building.

At any rate, a building is now expected to express, not only the general character of its type, but also the more special character of that division or subdivision of its type to which it happens to belong. A museum is expected to look like a museum, or a theatre like a theatre, and like nothing else. What is more, such ideas are now beginning to be put into practice, and recent educational movements are not only insisting on the supreme importance of obtaining the exact character of every building, but are elaborating a definite method whereby it can be obtained.

Nothing is more noticeable to those who expect a building to express something definite, and not merely to stir vague sensations of a pleasurable nature, than the entire absence of character in most of the buildings erected during the latter half of the last century, and in too many of those erected since.

However much this may have been due to the desire of the architect to be "original," to infuse his own personality into his work, or to apply the forms and features of the style he happened to admire where they were not rightly applicable; or however much it may have been due to his ignorance of a method whereby the real character of a building could be drawn out and emphasised, the whole blame for results which are no longer considered satisfactory should not be placed on the architect's shoulders without due consideration of the conditions under which he often must work.

Where a building belongs to a definite type, and is built to perform the functions of that type and those functions only, the conditions may be considered favourable, and in most works of a domestic or commercial nature, built by private individuals, these favourable conditions seem to exist. A house is usually built simply as a place of residence and for no other purpose. The same might be said of factories, warehouses, and many other buildings which have only one definite function to perform. Where the architect fails to express the character of this single definite purpose the blame may be his, but not when the building is called upon to fulfil two or more separate, and possibly conflicting, functions, as is too often the case with public buildings.

A public swimming-bath, for instance, might serve a single and clearly-defined purpose quite distinct from any other purpose. If arranged and constructed with a single eye to that purpose, and that purpose alone, a most characteristic effect, exactly expressive of that purpose, might be obtained. Yet how often do architects get the opportunity of obtaining it? In almost every case they have to modify the characteristic arrangements and the most expressive features of a swimming-bath in order that it may also be used as a hall for public entertainments.

The compromise that usually results may be most ingenious, but it is neither exactly suitable for, nor completely expressive of, either a bath or a public hall, and it loses in practical convenience and architectural expression to that extent, but the blame must not be put on the architect.

Evidently his work would be easier and its results of greater public value were he permitted to erect two separate buildings, each of them characteristic of its purpose and expressing something definite which the public could understand. Financial considerations may be so predominant in certain of the poorer urban districts as to justify the procedure generally adopted, but such considerations cannot be so pressing as to justify the corporation of a wealthy city in modifying the ideal plan, and therefore the characteristic expression of an art gallery, in order that it may be used for civic and other receptions, or in altering the arrangement of, and adding excrescences to, the Town Hall, in order that revenue may be produced by letting it to private individuals for purposes other than that for which a Town Hall is primarily erected. Such things may be done, and are done, and possibly financial advantage is obtained, but only at the expense of the character of the buildings.

But in such cases as that of a Town Hall even this advantage may not be very substantial. The arrangement of such a building so that it can be let to private individuals usually means the addition of extra features, which entail an additional capital expenditure, interest on which must be earned before a profit can be shown. True economy might be equally well served if all towns erected their civic buildings in strict conformity with their revenue, and so relieved themselves of the necessity of making a profit on the home, or the residence of the town, a proceeding which might be considered as unworthy of the dignity of a town as it would be unworthy of the self-respect of a private citizen.

The casual or intermittent use of a characteristic building, already erected, for functions other than those which it expresses is a somewhat different and, possibly, less serious question. An art gallery that possesses the ideal form and character of an art gallery may be used for any other purpose, festive or funereal, than the exhibition of works of art without destroying its character. Its characteristic expression is still there, however opposed it may be to the use to which the building may happen to be put at the moment. The building may be insulted by this use, but it is not injured.

But at the same time it seems impossible to deny that the habit of using a building for all sorts of purposes tends to divert attention from the fact that it was designed for one only, and that this habit betrays an indifference to all but the most obvious and materialistic qualities of a building and a lack of response to æsthetic suggestions. The youth of the present generation seem able to dance with equal enthusiasm and enjoyment in a public bath, a picture gallery, or a Town Hall, quite regardless of the fact that the forms and colours and whole character of their environment may be out of harmony

with the sentiment of the moment, and may even suggest ideas and feelings entirely destructive of it. Presumably they would be able to enjoy themselves equally well in the central hall of a criminal court or the crypt of a cathedral, provided the floor was suitable.

Psychologists may explain this to their own satisfaction, but unless we are to believe that people are always, and under all conditions, so preoccupied as to be unconscious of their surroundings, or so obsessed by subjective impressions as to be impervious to objective ones, it is not so easy to explain how serious and, presumably, intelligent people can wait patiently for a meeting in a theatre or concert hall gazing placidly, with no sense of incongruity, at joyous and, possibly, frivolous decorations which were never intended to strengthen the moral fibre and brace them up to the astute and solemn purpose of reforming the tariff, the suffrage, or the morals of their neighbours, or to any other of the incongruous purposes for which such buildings are continually being used.

To contend that human beings are impervious to sense impressions and that the form and the decorations of a building have no effect on human feelings and actions is to deny the power of art. To suggest that a building may be used for all purposes with equal propriety is to deny the existence of architecture, as this term has hitherto been understood.

Future developments may possibly lead to composite buildings capable of serving every purpose for which human beings gather together, but while architecture is what it is at present architects are concerned only with the problems of the present. Their solution of these problems is not made any easier by a general indifference to a quality which in all ages has been regarded as the first essential quality of all buildings with any pretension to the name of architecture.

NOTES.

Protection of Works of Art.

WE notice that the judge at the London Sessions in sentencing a woman to six months' imprisonment for damaging the Rokeby Venus is reported to have said that he quite realised the sentence was thoroughly inadequate to the crime, but that it was the maximum sentence prescribed by the law for damaging works of art. Had it been a window he could have passed a sentence of eighteen months' imprisonment. It is not quite clear what occurs when the damaged work of art happens to be a window, also, as was the case at the church in Smith-square, Westminster, where antique stained glass was damaged by explosion. If the perpetrator of this senseless outrage should ever be discovered it is to be hoped that he or she will be charged with damaging a window and not a work of art, and punished accordingly. But it is time that the law was altered, and that works of art were given protection more in accordance with their value to humanity. In this matter we are not only acting as owners of property valuable to ourselves, but also as trustees for the whole civilised world and for future generations as well.

Discovery at Abydos.

IMPORTANT discoveries made by M. Naville, which throw light on the uncertainty surrounding the Osireion at Abydos, were announced at a recent meeting of the Egypt Exploration Fund. The excavations begun some few years ago by the Egyptian Research Account have now been carried sufficiently far by M. Naville to enable him to identify the Osireion with the Memnonium mentioned by Strabo as containing the "Well" or "Fountain" of Osiris. The excavated building is in the right position, immediately behind the Great Temple of Abydos, and, although much of its masonry has been removed by succeeding generations, particularly during the Roman period, enough remains to show that it was built of the huge megalithic blocks described by Strabo. The building appears to consist of an oblong open court with covered colonnades sheltering the cells on the two long sides. What seems to identify it more particularly with a "well" is the fact that the court appears to have had no pavement, the granite walls enclosing the cells being traceable to a depth of 13 ft., at which depth water was discovered, leading to the suggestion that the court was originally a tank or well. At the further end of the court a small narrow chamber was disclosed which, judging from its inscriptions of the time of Seti I., may have been the innermost sanctuary of the Great Temple in which the relics of the god Osiris were kept. It is not quite clear from this description how this chamber and the cells were approached if the court was originally full of water, but no doubt further explanation will be forthcoming. Whether M. Naville's identification of this building is correct or not, there seems little doubt that it was one of the most ancient and important of those dedicated to the worship of Osiris at Abydos, and that his discovery is one of great interest and importance.

Restoration at St. Mark's.

FROM an interesting article in the *Times* we learn that the restoration to the angle pavilion of St. Alissia on the west front of St. Mark's, Venice, is now approaching completion. This pavilion, though at the time needing repair, was not included in the restoration of the west front carried out about the middle of the last century, and since that time its foundations have settled still further. The system of fortifying rather than renewing the foundations, which the previous restorer so successfully applied, has been adopted again, but not, we are glad to say, his system of replacing the old marble veneer by new. The necessity for practically rebuilding the disintegrated brick core of the walls without damaging the well-preserved marble casing raised a problem somewhat different from that with which we are familiar in this country, where the constructional methods usually found in old buildings are different, and where the action of a moister climate on a softer material rarely leaves the surface of the details of a building in such a good state of preservation, so raising a question of the proper treatment of decayed surface and mouldings with which the Venetian restorers did not have to deal. The careful removal and replacing of the marble casing so as to leave no trace of the operation might not completely satisfy extreme opinion in this country, but it appears to meet with approval in Venice, and indeed it is difficult to see what else could be done.

Sergeants-at-Mace.

WE see possibilities in the formation of the Guild of Sergeants-at-Mace. Consisting of twenty-eight mace-bearers of the London boroughs, together with the "chief ceremonial officers" of Westminster Abbey, St. Paul's and Southwark Cathedrals, and a representative of the London County Council, the Guild will concern itself with the ceremonial suitable to the various boroughs and with the precedence of their officials. Ceremonies expressive of the dignity of the functions being performed have a certain value in public life which is not so well appreciated in this country as it might be. A Guild of Sergeants-at-Mace, devoting themselves to the study of the subject, might do much to promote a wider appreciation of its importance, not only on special occasions, but during the daily discharge of the routine duties of the London boroughs. The question touches us somewhat nearly, as the arrangement of buildings is determined by the ceremonies and functions performed within them. Stately ceremonial leads to a stately lay-out. If the Guild of Sergeants-at-Mace decrees, as doubtless it will decree, that the London Mayor in chain and robes, preceded by his mace-bearer and followed by his officials in the order of precedence established by the Guild, shall proceed in stately procession from his Parlour to his seat in the Council Chamber at every meeting of the Council, it is evident that the building must be laid out accordingly. A straight processional way and ceremonial approach on the main axis of the building, forming a vista from the Mayor's Parlour to his seat of office, seems the least that will be required. Few of our present municipal buildings being arranged with sufficient stateliness, better things may be hoped for in a future prompted and controlled by the Guild of Sergeants-at-Mace.

Our Schools of Architecture.

IN view of the large amount of interesting work which is now being done by the various Architectural Schools throughout the country, and as we have difficulty in finding sufficient space in our columns to notice work which is of the first importance to the architectural profession, we have decided to rearrange our reviews so as to give a monthly review to the work of the Schools. Our Legal and Civic Reviews will stand as at present, but we intend in future to amalgamate our Construction, Lighting, Heating, and Engineering Reviews, which will enable us to give a monthly Schools Review. We hope in this way to be able to increase the usefulness of the *Builder* to the architectural student, as we consider it is largely on the success of his efforts that the future of architecture in this country must depend. It is, we believe, owing in no small measure to the manner in which the work of the architectural student is noticed and considered in France that the great artistic pre-eminence of that country has been made possible. Compared with France, the systematic training of our students is an affair of yesterday, and the progress which has been achieved in architectural matters in America is largely owing to the well-considered and thorough training that the American architect has received. We do not mean to express a predilection for any one of the systems in vogue in this country. The Academy School, the Architectural Association, the Schools of Architecture at Liverpool, Manchester, and other of our provincial centres, and the newly-founded Atelier in London are, we believe, all doing excellent work. We wish, as far as space permits, to notice and to illustrate all such work, while not neglecting or overlooking the claim of actual contemporary architecture which is growing up in our midst.

Woburn-Buildings.

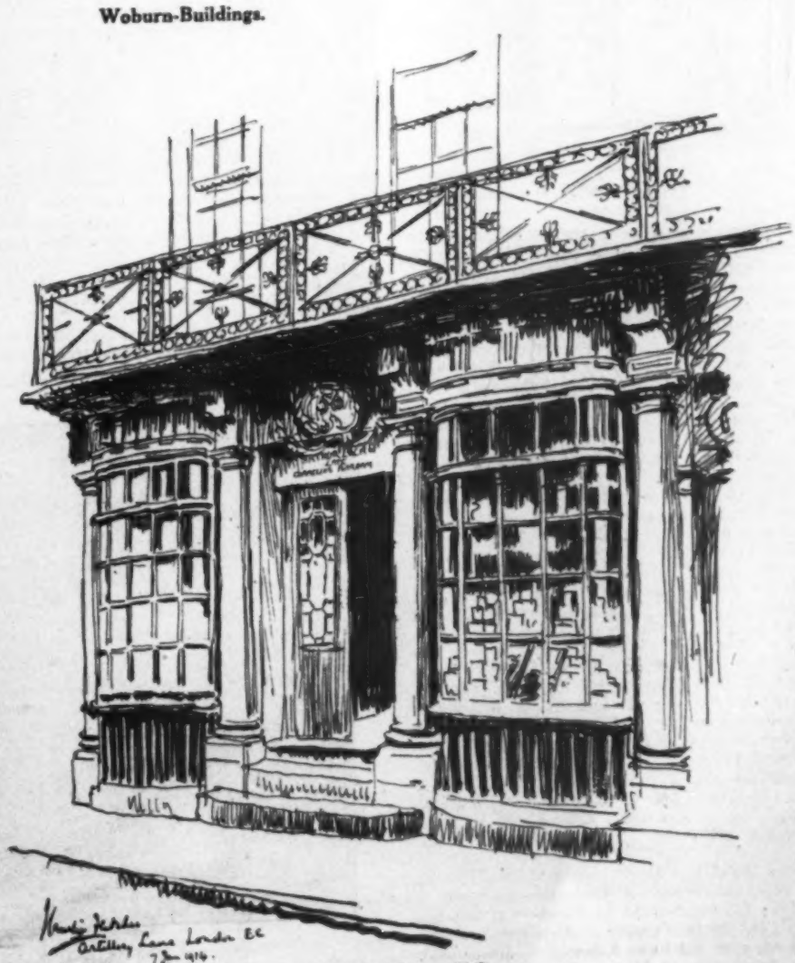
THE ARCHITECTURE OF THE SHOP FRONT.—III.

We have taken a critical survey of what may be considered the two principal shopping centres in London, namely, Regent-street from Oxford-circus to Piccadilly-circus and Bond-street. In each case we followed the east side southward and the west side northward and made notes of any fronts of interest. We would, in the case of Regent-street, like our readers to follow a similar course, as we think they probably have not recognised the full force of the necessity for control, and will not until they have done so.

Regent-street has justly been considered one of the finest streets ever made. Both from the point of view of width and direction it should afford an ample opportunity for the best architectural treatment which can be applied to commercial premises. There is ample room to get effect, and a long view can be obtained from any point in it except at the Piccadilly end of the Quadrant curve. There, too, the effect of the simple curving lines on each side as the street sweeps round into Piccadilly-circus should be an unusually fine one.

Then, again, we have the fact that the premises on either side are used for purposes to which a uniform scheme of treatment would be applicable; the great bulk of the property facing the street on either side is in the hands of the same ground landlords; the tenancies terminate at very much the same time—every reason, in fact, exists which should render the problem an unusually easy one to solve. And it was solved in the time of the Regency by Nash, who produced an architectural effect in plaster which, while it left much to be desired in point of detail and in the choice of materials, at least showed that our forefathers had a sense of architectural fitness which seems absent to-day.

The new buildings on the south-east side of Oxford-circus are among the better of those recently erected in Regent-street. Judged as part of an architectural scheme to be applied to the whole street, they would have much to



Artillery-Lane, E.C.

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Messrs. Marshall & Snelgrove's Shop Front.
By Messrs. S. W. Francis & Co., Ltd.

recommend them; as isolated buildings they are, however, not satisfactory, the columnar treatment being one which should only be applied to parts of a long frontage. The great height of the new buildings, if applied to the whole street, would also detract from its sunniness, and would be a blot if the same skyline could not be maintained. We do not know whether the same line of heights is to be continued when Messrs. Dickins & Jones's

43, Piccadilly, W.

new premises are rebuilt, or whether the ghastly circular angle at the junction of Little Argyll-street and Regent-street will be carried on glass as at present.

The treatment of the Maison Lewis shop front further south, with its canopied doorways, would have something to recommend it if carried out with more refinement, and if it bore some small relation to the superstructure.

The most shameless blot on the east side in this respect, however, is the way Messrs. Hamley's shop front is carried out, cutting completely across all architectural lines of the superstructure.

Nos. 180-186 are occupied by new buildings of little merit or distinction, and the new buildings of Messrs. Robinson & Cleaver leave much to be desired. Another of the newer fronts—that of Messrs. H. C. Nicholl & Co.—illustrates the general paralysis of design which distinguishes recent attempts in this ill-used street; and it is with much relief we come to the southern end of the Quadrant, where the irregularity of the shop fronts jammed in in front of the original street line does not entirely destroy our pleasure in the quiet and happy fenestration of the superstructure, with its balustrading at the second-floor level.

On the west side starting from Piccadilly-circus we first have the premises of Messrs. Swan & Edgar, who we hope will finally adopt a building scheme which will accord in some measure with the Piccadilly Hotel to the north.

The Hotel has many strong points, but is, we fear, rather among the white elephants of design: too insistent to be disregarded, but too much out of touch with modern requirements to form a model to be followed on either side. The treatment of Messrs. Stewart Dawson's shop windows, though unobjectionable in itself, is quite out of keeping with the arches which frame the composition. The rather dull design of the London Joint Stock Bank at the corner of Heddon-street breaks the deplorable mass of incongruous shop fronts which stretch up to Conduit-street, only interrupted by Messrs. Verity's finely-designed building, Nos. 193-197, Regent-street—a building which is, however, hardly suited to its position.

Above Conduit-street is Regent House, which replaces, by vulgar and commonplace design, the beautiful church which was pulled down to make room for it.

Messrs. Verrey's old shop front has charm, though it has no architectural connection with the superstructure, and No. 237, Regent-street is distinguished by one of the few well-designed modern shop fronts on either side.

We can imagine no more melancholy presentiment of our inability to design our streets than Regent-street of to-day, and it seems to us that little is now left save to wait, as Sir Aston Webb suggested in his London dream, until the leases again fall in and a chance arises to design Regent-street anew as a whole.

In contradistinction to Regent-street, which contains almost nothing good, Bond-street—especially Old Bond-street—contains some of the best-designed modern shop fronts in London. Old Bond-street is narrow, and New Bond-street only of moderate width, which makes the individual treatment of the various fronts less open to question.

Along the east side of New Bond-street, starting from the north end, the first front of any merit is that of Messrs. Benson's, No. 83, adjoining which is a charming little front designed in a French manner—Messrs. Bardellion et Cie—and marked by the thoroughly architectural treatment of both ground and first floor.

Messrs. Cardinal & Harford's shop front, with showroom over, No. 64, is well designed and pleasing, the bowed first-floor windows on each front being rather a novel feature.

In Le Roy & Fils, No. 57, we have an old bowed frieze and cornice, with modern filling in under; while Messrs. Pinet's shop front gives architectural supports needed by the superstructure over, a point which is unfortunately unusual! No. 27, occupied by the Verascope Company, shows one of the curved-glass fronts, which we believe to be more ingenious than effective; and No. 8 is a carefully-designed and well-detailed front.

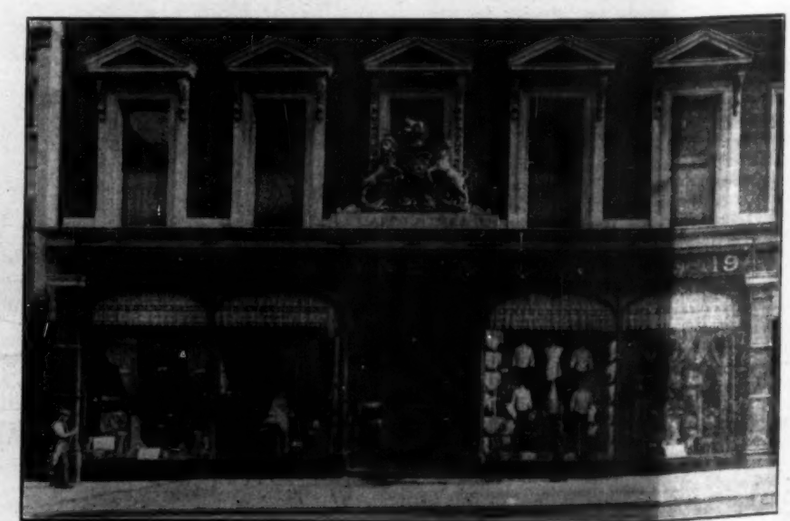
At the corner of Burlington Gardens and Old Bond-street we have Mr. Voysey's front of Messrs. Atkinson's, the perfumers—a front which can hardly be called a shop treatment, though it serves its purpose of attracting attention to the wares within; it is, indeed, a suggestion of the mediæval more than anything else. Messrs. Duveen's front, further down, is well designed, as is also Messrs. Pope & Bradley's, No. 14.

The designer of Messrs. Fuller's, No. 9, has given a delightfully refined and interesting shop front, and Messrs. Teckla's is also excellent in conception and execution; while Messrs. Sandorides, No. 5, is well known as an instance

Bond-Street.

of pleasing and appropriate treatment for a very narrow front.

On the west side going northward are many well-designed fronts, among which we may notice Messrs. Glynn's, No. 44; the Topaz Pearl Company, No. 38; and No. 180, Messrs. Boucheron's, a broad treatment in which the

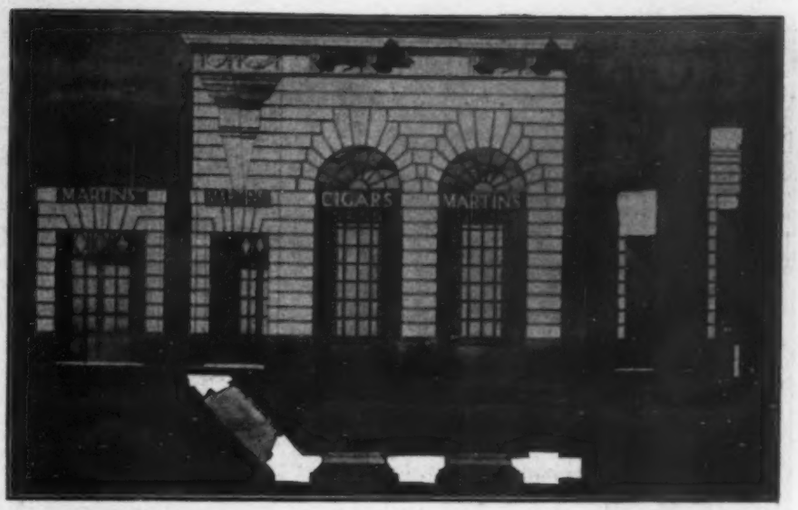


Messrs. Redmayne's Shop Front.
By Messrs. S. W. Francis & Co., Ltd.

window space and its setting are carefully and thoroughly thought out and considered. Messrs. Fabergé's front, No. 173, is well known for its excellence.

Passing northward up New Bond-street, we note the clever front of the Darracq Motor Company, No. 150, which would, however, have gained by more care in detail. Messrs. Colnaghi's front, No. 144, is excellent, and has lately been illustrated; while another of the better fronts is that of No. 99, New Bond-street. It would almost seem as if the attention of architects, and perhaps the willingness of their clients to spend, had been concentrated in Bond-street, and as if there had been a gradual concentration of effort towards the southern end of the street; in either case the best modern designs for shop fronts for narrow frontages are certainly to be found in Old Bond-street.

But it is not the solution of the individual shop-front problem which lies at the root of the difficulty, but the treatment of the many miles of wider shop fronts in centres like Regent-street and Oxford-street; and we do not, as we have said before, see any solution of the difficulty except in the direction of the assumption of authority by some public body who would lay down rules which would prevent both owners and their architects breaking



Design for a New Shop Front for No. 210, Piccadilly: Side Elevation.

By Mr. W. J. Palmer Jones.

No. 21, York-Buildings.

Messrs. Hayward & Maynard, A.R.I.B.A., Architects.

what we may term æsthetic canons of taste.

If we are content, as we seem to be, to see buildings erected side by side in every variety of architectural or unarchitectural treatment, if we are content to see the angles of our streets apparently supported by sheets of plate glass, we can go on as we are doing and we shall get what we want.

The individual shopkeeper is almost powerless. He pays for a certain frontage, and if he does not make the fullest use of it for purposes of display his neighbour will, and he will be at a disadvantage. It is easy to be magnanimous and generous when considering other people's problems, and the man of independent means may pride himself on his taste and express his comfortable conviction that he is not as other men are, but we know, if we stop to think, that this is cant and humbug.

The man with an 18-ft. shop for which he pays a heavy rent is bound to utilise every inch of available frontage, and the architect who is called in to advise him is bound to do his best to help him to do so; but it should be within the power of a public authority to lay down the same rule for all.

If we are bound to give up a certain proportion of space to supports, no one's trade will be prejudicially affected; if we are bound to build shops along the street of equal height and to give the same depth to fascia boards, no one will be injured. And it is only in this way, we believe, that the difficulty can be met; it is not want of taste which urges on the shopkeeper, but necessity.

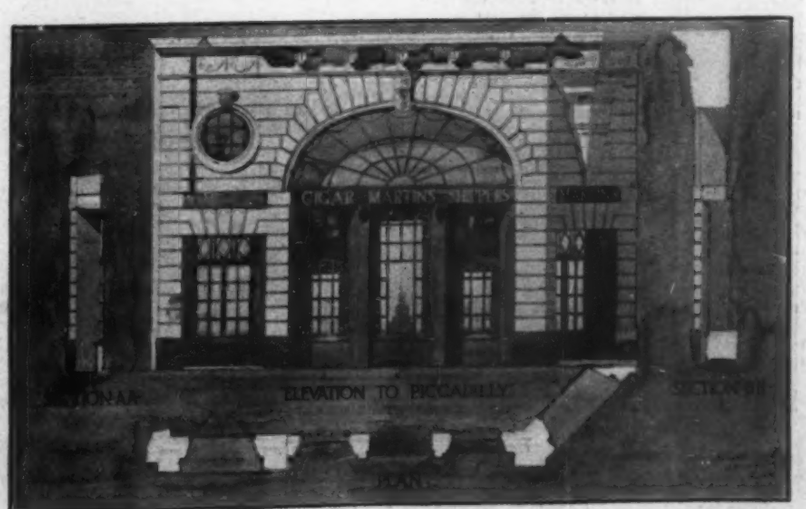
A similar argument applies to the taxation of posters—an expedient which would bring revenue to the State, and which would result in the reduction of their size; while the total prohibition of sky signs and illumination devices would injure no one.

As it is, we go on regulating matters which might perfectly well be left, and leave untouched what might be easily reformed, and our towns become a little more vulgar and objectionable with every decade.

A COMPETITION DESIGN FOR A SHOP FRONT.

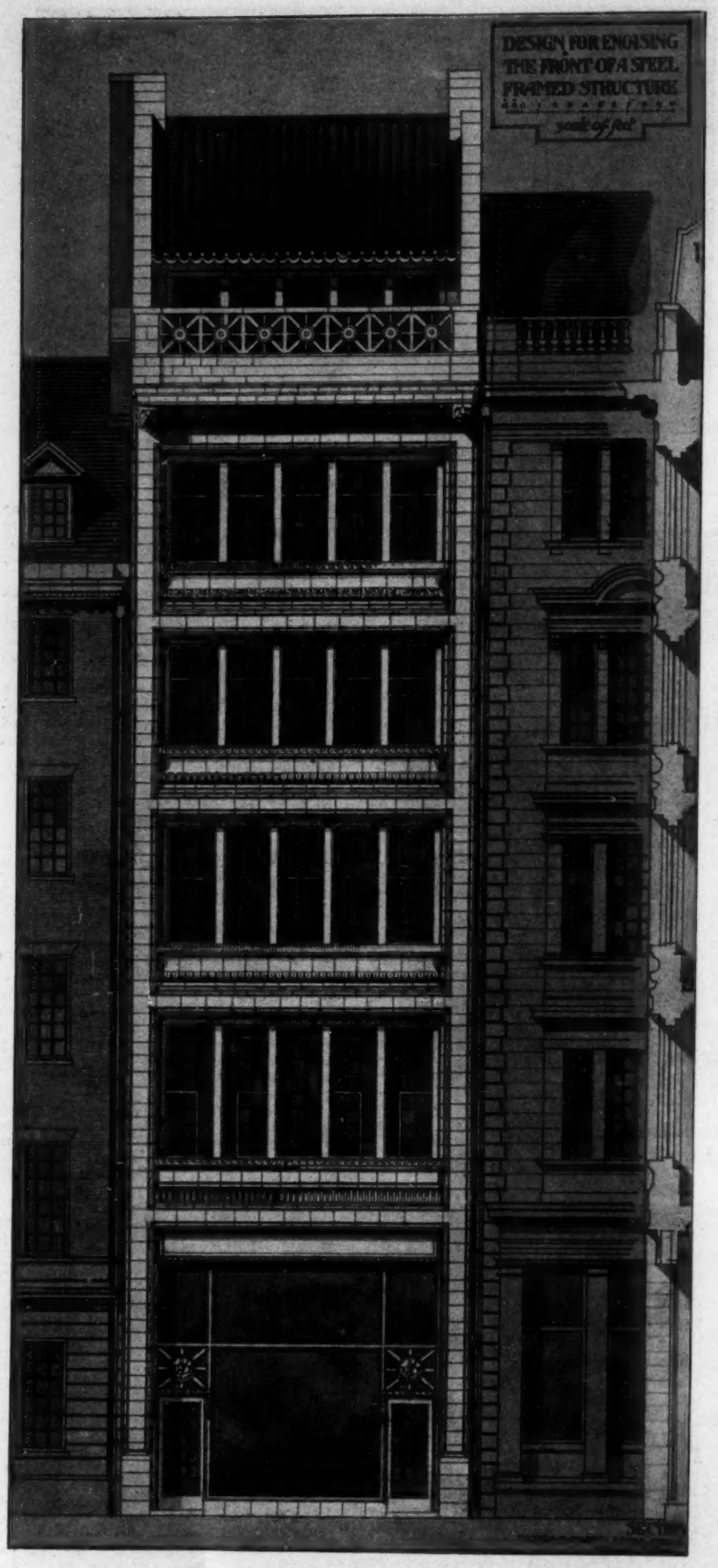
This design was recently submitted in competition for a new shop front for Messrs. Martins, cigar merchants. All the masonry with the exception of new door jambs and heads and a new black marble plinth was left as existing with a view to keeping down the cost.

All the woodwork was to be of oak ebonised and finished with a very slight polish. But little space for display was required, a few boxes of cigars, etc., being all that would be shown in the windows. A note somewhat out of the ordinary was struck by the introduction of the painted oval panels over the side windows representing "Smokers of Various Nations." These were intended to be changed from time to time, thus forming a source of continuous interest to passers-by. Attention was paid to the appearance of the shop part by night as well as day, and with this object in view the painted panels would be lit up by "Linolites"



Design for a New Shop Front, No. 210, Piccadilly: Front Elevation.

By Mr. W. J. Palmer Jones.



Design for a Shop Front.

By Mr. T. Tyrwhitt, A.R.I.B.A.

[This is an experimental design by Mr. Tyrwhitt, who writes:—"As regards the crushing appearance of a pile of masonry over the wide span of a shop front, it seemed that the difficulty of the situation was somewhat relieved by extending the structural expedient of the long girder of the ground floor to each floor above, and by admitting its existence with equal frankness. This is no more than to adopt the ordinary steel-frame construction and allow it expression."]

hidden in the soffit of the fascia at night, or as an alternative they could be transparent and lit up from the back, giving an effect similar to some of the illuminated posters used by the underground railways. All the lettering on fascia, etc., would also be lit up from the back.

In order to give a "finish" to the front and to provide a frame for the goods in the windows, curtains of silk, of bold design and bright colouring, would be hung at the back of window frames, which at night, lit up from the back, would give a very pleasing effect somewhat akin to that of stained glass.

Over 200 designs were sent in in the competition, and the £50 premium was divided amongst five competitors.

W. J. PALMER JONES.

21, YORK-BUILDINGS.

This shop-front was inserted in this building some twelve months ago as part of general structural remodelling of the building. The house forms part of the Adelphi Estate, and the shop front was designed to be in harmony with the locality and its eighteenth-century traditions. It is now occupied as the "Twenty-One" Gallery, where recently a fine exhibition of Piranesi prints was given, as noticed in this journal. The work was carried out for the owner of the Adelphi Estate (Mr. G. J. Drummond) to the designs and under the superintendence of the architects, Messrs. Hayward & Maynard. The general contractors were Messrs. J. D. Hobson, Ltd., of Duke-street, Adelphi.

SPECIAL GENERAL MEETING:

Election of Royal Gold Medallist.

AT a special general meeting summoned in accordance with the by-laws to elect the Royal Gold Medallist for the current year, and held on Monday, March 9, Mr. George Hubbard, F.S.A., Vice-President, in the chair,

The Chairman moved, Mr. A. W. S. Cross, Vice-President, seconded, and the meeting unanimously resolved that, subject to his Majesty's gracious sanction, the Royal Gold Medal for the Promotion of Architecture be presented this year to M. Jean Louis Pascal, Member of the Institute of France, Commander of the Legion of Honour, for his distinguished services as a teacher of architecture and for his executed works as an architect.

This concluded the business of the meeting.

At a special general meeting which followed the Chairman announced that, at the urgent request of the Council, the President had consented to allow himself to be nominated for a third year of office, and that the meeting was called to obtain the sanction of the general body to the suspension of By-law 28 in order that he might be nominated President for the Session 1914-15.

The Chairman then moved, and Mr. A. W. S. Cross seconded, and the meeting unanimously resolved that, under the provisions of By-laws 65, 66, and 67, subject to the approval of the Lords of his Majesty's Privy Council, By-law 28 be suspended from March 31, 1914, to June 30, 1915.

Further, on the motion of the Chairman, it was resolved that the very cordial congratulations of the Institute be offered to Mr. Blomfield on his elevation to full rank as Royal Academician.

The special meeting for the suspension of By-law 28 then terminated.

At a business general meeting following the decease was announced of Mr. Peter Rosby Donald, Licentiate.

Mr. A. W. S. Cross, acting for the Hon Secretary, formally announced the receipt of a number of works presented to the library, and a cordial vote of thanks was passed to the donors.

The following candidates were elected by show of hands under By-law 10, viz. :—

L. K. Adams, M.A., Warrington
G. M. Aylwin
J. A. Baskerville, Manchester
P. D. Bennett, Birmingham
H. J. Birnstingl
C. W. Box
J. W. Bull
J. O. Cook, jun.
R. Cromie, P.A.S.I.
H. Crone
L. A. Culliford, P.A.S.I., Coventry
W. F. Dawson, Leeds
H. A. Dod, M.A., Liverpool
E. S. England, Oldham
S. H. Fisher
G. H. Forgitt, Yeadon, near Leeds
W. W. Friskin
R. P. Gaymer, North Walsham, Norfolk
H. B. S. Gibbs, Sheffield
H. V. Godfrey
W. S. Grice
R. H. Gutteridge
C. H. Hartmann
W. H. Hatchard-Smith
C. D. Hawley
A. V. Heal
J. O. B. Hitch
H. D. Holland, Wigan
V. H. Hughes
P. R. Jelley
H. Jones, Manchester
W. S. Jones
C. S. Kimpton
A. B. Knapp-Fisher
H. B. Leighton, Sheffield
A. Lowcock, Rotherham
A. E. Lowes, Newcastle-on-Tyne
R. N. H. Mackellar, Glasgow
H. W. Mann
H. E. Matthews, Derby
T. N. Newham
W. Paterson, Edinburgh
H. C. Powell, Stockport
W. Pritchard, P.A.S.I., Liverpool
C. W. Rogers
R. T. Russell
W. A. Rutter
S. Salisbury
S. J. B. Stanton
C. E. Tebbs, Newport, Mon.
W. H. Thompson
R. A. Walter
C. C. T. Warnes, Edinburgh
F. Woodward
L. M. Yetts, B.A. (Cantab)

As Hon. Associate :—

E. Bullough, M.A. (Cantab), Cambridge

The Secretary announced that Messrs. Richard Wood and W. E. Johnson had been reinstated by the Council as Associates.

The meeting then passed to the consideration of the draft Revised Schedule of Professional Charges (adjourned from the meeting of January 12), commencing with Clause 4.

*CLAUSE 4.—*If the project be abandoned, or if from any other cause the services of the architect cease or are dispensed with before a contract is entered into or order given, the remuneration is as follows :—*

For preliminary studies, and approximate estimate by cubic measurement, one-fifth of the appropriate percentage calculated on the estimated cost.

For preliminary studies, approximate estimate by cubic measurement and general drawings and specifications sufficient to enable quantities to be prepared or a tender obtained, three-fifths of the appropriate percentage calculated on the estimated cost.

An amendment by Mr. Edward Greenop, seconded by Mr. H. P. Burke Downing, to delete the words "if from any other cause" was agreed to.

An amendment by Mr. Edward Greenop, seconded by Mr. W. Henry White, to insert the words, "or instructions," so as to read "before a contract is entered into or order *or instructions* given," was negatived, and the wording agreed to as printed in the draft.

After discussion of various amendments, the second and third paragraphs of the clause were agreed to as follows :—

"For taking client's instructions, preparing sketch design, and making approximate estimate of cost by cubic measurement, a fee equal to one-fifth of the fee set out in Clause 1.

For taking client's instructions, preparing sketch design, making approximate estimate of cost by cubic measurement and preparing drawings and specifications sufficient to enable quantities to be prepared or a tender obtained, three-fifths of the fee set out in Clause 1."

CLAUSE 5.—*The above remuneration shall cover the above specific services or their equivalent; and on a contract being entered into or order given for the works the architect shall be paid an instalment of three-fifths of the appropriate percentage calculated on the total price of the contract or order, and no part of such payment shall be reclaimable from the architect on account of the subsequent abandonment of the works or for any other reason. The remainder of such remuneration shall be payable by instalments from time to time as the work proceeds on the issue of certificates to the contractor.*

Various amendments proposed by Mr. A. W. S. Cross, Mr. S. D. Topley, and Mr. Edward Greenop were agreed to, and the clause was passed as follows :—On a contract being entered into or order given for the works the architect shall be paid an instalment of three-fifths of the fee calculated on the total amount of the contract or order, and no part of such payment shall be reclaimable from the architect on account of the subsequent abandonment of the works. The remainder of such remuneration shall be payable by instalments from time to time as the work proceeds on the issue of certificate to the contractor.

CLAUSE 6.—*In addition to the percentage on the total cost of executed works the architect is to be paid three-fifths of the appropriate percentage calculated on the estimated cost in respect of all works included in the tender or order, but not executed.*

The substitution of the word "fee" for "percentage" and "appropriate percentage" was agreed to, and with these amendments the clause was carried.

CLAUSE 7.—*In all cases where the remuneration is by way of percentage, the amount of the percentage shall if necessary be apportioned, and the total or estimated cost (as the case may be) shall be valued as though the works are executed with new materials throughout.*

After considerable discussion, the wording of the clause was recast by Mr. Paul Waterhouse, and agreed to as follows :—"In all cases where work is executed wholly or in part with old materials, or where material or labour is provided by the client, the fee shall be calculated as if the works were executed with fully-paid material and labour throughout."

CLAUSE 8.—*The above percentages do not cover the following services, for which, and for any other services not covered by any payment herein provided for, the charges are to be based on the skill and work involved, but are in no case to be less than the time charges mentioned in Clause* 18 :—

Advising as to the selection and suitability of site; the preparation of further sketch designs necessitated by a material alteration in, or addition to, the client's instructions; negotiations relating to the site or building; surveying the site or building and taking levels; making surveys or plans of buildings to be altered; making arrangements in respect of party walls and rights of light and other easements, reservations, or restrictions; making extra drawings for client's or contractor's use; making drawings for, and negotiations with, ground landlords, adjoining owners, or local or other authorities; the measurement and valuation of deviations, alterations, additions, and omissions; services in connection with the laying-out of grounds; services consequent on the failure of contractors, by death or otherwise, to carry out the works; services in connection with fire, flood, or tempest during execution of works, or services in connection with litigation or arbitration.

A motion by Mr. Herbert Shepherd that the clauses be read before being put to the vote was lost, and Clause 8, as printed in the draft, was agreed to without alteration.

CLAUSE 9.—*For surveying and making a plan of a town, village, street, estate, or grounds, and for designing and preparing plans for the development of an estate, the charges are in accordance with Clause* 8.

The clause was agreed to without alteration.

At this point, on the motion of a member, a count was made of those present, and the numbers being found short of the necessary quorum, the Chairman declared the proceedings at an end.

* The clauses in italics are as printed in the original draft.

THE THAMES-SIDE.

A House of Lords Committee, of which Lord Hylton is Chairman, passed on March 12 the Bill promoted by the Brentford Gas Company, but declined to grant powers to them to construct works for the making and storage of gas upon a site by the riverside at Chiswick—a proposal to which we adverted in our article upon Chiswick House of March 6 last. That part of the company's project was opposed by owners and residents of Barnes and the neighbourhood. Mr. F. O. Stanford, Local Government Board Inspector, has held an inquiry into the matter of the Windsor Corporation's scheme to borrow £4,000 for improvements by the riverside near Clewer, to include swimming-baths and a bridge to the island, which will be protected with camp-sheeting from erosion by the river.

MR. W. CURTIS GREEN (President) took the chair on Monday at a combined ordinary general meeting of the Architectural Association and of the Camera, Sketch, and Debate Club.

Nominations for Office.

The nominations for the election of Officers and Council for the 1914-15 Session of the Association are as follows :—

President, Maurice E. Webb, M.A.
Vice-Presidents :—G. Leonard Elkington, A.R.I.B.A.; H. Austen Hall, F.R.I.B.A.
Ordinary Members of Council :—P. H. Adams, A.R.I.B.A.; Cecil C. Brewer, F.R.I.B.A.; F. Dare Clapham, F.R.I.B.A.; Cyril A. Farey; T. F. W. Grant, A.R.I.B.A.; Edwin Gunn, A.R.I.B.A.; E. Stanley Hall, M.A., A.R.I.B.A.; V. T. Hodgson; Gilbert H. Jenkins; Ralph Knott; P. Cart de Lafontaine; A. G. R. Mackenzie, F.R.I.B.A.; E. Brantwood Maufe, B.A., A.R.I.B.A.; Leslie T. Moore, A.R.I.B.A.; F. Winton Newman, F.R.I.B.A.; W. G. Newton, A.R.I.B.A.; W. J. Palmer-Jones; A. Gilbert Scott; Philip E. Webb, A.R.I.B.A.
Past-President, W. Curtis Green, F.R.I.B.A.
Hon. Treasurer, Stanley Hamp, A.R.I.B.A.
Hon. Editor *Architectural Association Journal*, J. Alan Slater, A.R.I.B.A., M.A.
Hon. Librarian, F. C. Eden.
Hon. Secretary, H. M. Fletcher, F.R.I.B.A.

Votes of Thanks.

The President proposed a vote of thanks to Professor Adshead and Mr. Ramsey for kindly granting permission for a party of members to visit the improvements to the Duchy of Cornwall Estate, Kennington, on Saturday, March 14; and a vote of thanks to the proprietors of the *Builder* for kindly presenting a copy of "Cathedrals of England and Wales" to the Association.

"THE WONDER OF WORK."

Mr. Joseph Pennell then read a paper entitled "The Wonder of Work," in the course of which he referred to the work of early artists and their methods, and concluded as follows :—

"From the very beginning I have cared for the Wonder of Work; from the time I built cities of blocks and sailed models of ships to them across the floor in my father's office, till I went to the Panama Canal, I have cared for the Wonder of Work. There are others who care—Brangwyn has cared, and so have Sauter, Muirhead, Bone, Strang, and Short. Way, Cameron, Bone, and Brangwyn have cared for the building up and the breaking down, and Brangwyn for life—the life of the workman, possibly because of his Belgian and seafaring education or his knowledge of Meunier, his countryman. And there are Belgians like Baertsoen, and Frenchmen like Lepere, Gillot, and Adler; and Italians like Pieretto Branco, and the great German Menzel.

But it is to America we must turn, and here Seymour Haden's "Breaking-up the Agamemnon" is notable; to White's etching of Brooklyn Bridge, Cooper's sky-scrapers, Alden Weir's New York at night, Childe Hassam's high buildings—to these one must look for the modern rendering of work. I have tried to do what I could in New York, Chicago, San Francisco, the coal mines of my native State—Niagara—and here, and on the Continent, and at Panama; and whatever their worth I can only, to end with, tell you and show you the Wonder of Work as I see it.

D

New York, as the incoming foreigner, full of prejudice or doubt or hope, and the returning American, crammed with guide-book and catalogue culture, see it, or might see it, rises a vision, a mirage of the lower bay, the colour by day more shimmering than Venice, by night more magical than London. In the morning the mountains of buildings hide themselves, to reveal themselves in the rosy steam clouds that chase each other across their flanks; when evening fades, they are mighty cliffs glimmering with glistening lights in the magic and mystery of the night. As the steamer moves up the bay on the left the Great Goddess greets you, a composition in colour and form, with the city beyond, finer than any in any world that ever existed, finer than Claude ever imagined or Turner ever dreamed. Why did not Whistler see it? Piling up higher and higher right before you is New York; and what does it remind you of? San Gimignano of the Beautiful Towers away off in Tuscany, only here are not eleven, but eleven times eleven, not low mean brick piles, but noble palaces crowned with gold, with green, with rose; and over them the waving, fluttering plume of steam, the emblem of New York. To the right, filmy and lace-like by day, are the great bridges; by night a pattern of stars that Hiroshige never knew. You land in streets that are Florence glorified. You emerge in squares more noble than Seville. Golden statues are about you, triumphal arches make splendid frames for endless vistas; and it is all new and all untouched, all to be done, and save for the work of a few of us, and we are Americans, all undone. The Unbelievable City, the city that has been built since I grew up, the city beautiful, built by men I know, built for people I know, the city that inspires me, that I love.

I went to Panama because I believed that in the making of the greatest work of modern time I should find my greatest inspiration.

This is the day and the time of the Wonder of Work. Within a few years, with the coming of electricity, the mystery of work, the smoke revealing, concealing mystery, will have rolled away for ever. And to-day the greatest works that man has ever undertaken are in progress in Europe and America. So I started on a trip of 15,000 miles in search of the most wonderful Wonder of Work in the world.

The day I landed in Colon I found it. I had seen great cranes at Pittsburg and Duisberg, but nothing like that which stretched its great arm, with great claws, over the sad, silent swamp of Mount Hope—the end of De Lesseps' dream. I had seen in New York, as I sat on the thirtieth story of the Metropolitan Building, a chain come up from below with a man clinging to it. But I had never imagined anything like the group of figures which rose out of Gatun Lock at dinner-time. I had looked into chasms and gulfs, but I never imagined anything so terrific as the gates of Pedro Miguel. I had seen the greatest walls of the oldest cities, but I never imagined anything so imposing as the walls of Miraflores Lock. I had seen the great aqueducts and great arches of the world, but I never imagined anything like the approaches to Gatun and the spring of Pedro Miguel, made by army officers and civil engineers mainly to save material. For there are no architects, no designers, no decorators on the Panama Canal—just engineers and organisers—Goethals, Gaillard, Gorgas, Williamson, Bishop, and more. But the engineers at Panama are great designers, and great work is great decoration.

Almost before I left the Canal, artists, architects, and decorators were on their way there. I hope it may interest them half as much as it interested me.

I have tried, in these lithographs of the Canal, to show some of the things I saw, but in the few weeks I was on the Isthmus many changed and disappeared for ever. What I did is a record of what I saw. Not that I came anywhere near exhausting the subjects—in every part of the Canal compositions may be found. I merely tried to draw the things I saw when I saw them—squatting on my sketching-stool where I could, or when I could, or on an iron girder, in the cab of an engine, a telephone box, on the top of a crane. I only refused to be suspended in a bucket 100 ft. in air over one of the locks, as I was invited.

Had I not had my previous experience in trying to draw work, I could not have done even what I did, but the study of great architecture is a great aid, for the locks are architecture. The workmen I hardly touched—they are the details in the Wonder of Work they have created. Where the work is fiercest, there the fewest workers are to be seen. It is only when they knock off you see that thousands are at it.

The mountains crowned with strange trees, the long level lines of cloud—I always believed to be an invention, or a convention, of the Japanese—that hang motionless before the hills, the impenetrable jungle, the native villages, were motives without end, maybe only for me.

Panama City is as picturesque as a Spanish city, and as full of character; it has yet to be lithographed, etched, drawn, or painted. There are churches, courtyards, balconied streets, forts, shops, gardens, ruins—a whole ruined city—all waiting the artist who has not yet come, though he is on the way. I wonder Whistler made no record of them on that unexplained trip of his across the Isthmus. But I went to draw the Canal. I had no time for anything else, though some of the vistas under the royal palms of Ancon Hill, looking down on the town, the Pacific beyond, are as fine as the Bay of Naples. And from the sea Panama is very like Naples.

But the Canal called me.

On the Canal I found the subjects I wanted—subjects I shall never find again—and it will always be a delight to me that I went—went on my own initiative and not at anyone's bidding. If my drawings have interested my own country and countrymen, and others' countries and countrymen, it is the greatest honour I could ask, and to have done some little thing with, and for, the great men who have made the Canal, and to have done something to record what they have done, and to have interested them, is far more than I ever expected. I shall probably never see the Canal again, but I have seen it and drawn it as well as I could, and I am glad I went, for it is the most wonderful Wonder of Work in the world.

We have recently been told that art will disappear in fifty years (by a person who says he will call his last book—with possible appropriateness—"Vale"). But, though he will disappear, and Post-Impressionism will be swallowed up in shopkeeping, and though the mustard-pot has gone with the soulful doggie, and the tearful baby rival of the Dresden Madonna, the artist who has something to say in his own way about his own time, and can say it, will live, and his work will live, with Rembrandt, Velazquez, Franz Hals, Meunier, and Whistler—artists who painted and drew the work and life about them, carrying on tradition, and never regretted the past. And art which shows life and work will never die, for such art is everlasting, undying—"The Science of the Beautiful."

Mr. Frank Emanuel,
in proposing a vote of thanks to the lecturer, said in the course of his lecture Mr. Pennell said that Turner imitated Claude, but that was a single item in a very crowded and independent career. Turner certainly at one period set out to try to beat Claude on his own lines, but had those experiments never been made there was enough left of entirely original effort to constitute Turner a giant, and an inventive one at that. That Turner could draw work was evident in his marvellous studies and paintings of shipping and in such plates as the Mill, the Rickyard, and Morpeth. Mr. Pennell cast a stone at Turner's drawings of architecture, but his architectural work was built on splendid foundations, and it would take an avalanche of stones to overthrow it. No one would dispute the lecturer's dictum that Whistler would endure, but personally he felt convinced that time would prove that Whistler's masterpieces—his mother, his Carlyle, his Thames etchings, and other marvellous things—would endure, but that much else that was very much over-rated to-day would find its true level, high as that might be. Mr. Pennell said that it was far easier to paint a heavenly host or a dream city in one's studio than to make a decoration out of a group of miners or to draw a rolling mill in full blast. It might be easier, but there were fewer who could do it satisfactorily. He would conclude by quoting a remark which Ruskin once made to him. He was kind enough to take an interest in his youthful efforts, and on one occasion he was showing him a water-colour of distant Conway Castle, enveloped in a purple shadow, and as a foil thereto he had painted a straw-coloured saw mill in the foreground. Ruskin said, "Young man, never depict any building that is less than 200 years old." Well, he did not see it at that time and he failed to see it now, and evidently Mr. Pennell would not have done so. He believed there was endless matter for the artist in up-to-date subjects in the modern machinery and in the work around them, for originality, he believed, was in the subject and it was there that the scope for originality came in, and not as the Futurists and other people would have them believe in depicting unrecognisable objects each one more absurd and hideous than the other.

Mr. P. H. Adams
seconded the resolution. He said that what struck him about Mr. Pennell's lecture was his love for humanity that was depicted in his pictures. What Mr. Pennell seemed to show them were the things that were worth while; he brought them right up to the teeming present and seemed to show them that life, after all, was one great opportunity.

Mr. H. M. Fletcher
said he thought Mr. Pennell would be surprised to find how many of them agreed with him in his admiration of the work of engineers when they did not try to be architectural. In none of the cases that the lecturer had illustrated had the engineers attempted architecture. He wished that Mr. Pennell had visited what always seemed to him (Mr. Fletcher) to be one of the greatest works in England—the Birmingham Waterworks in Radnorshire. He was convinced that that would have been a subject after Mr. Pennell's own heart. He remembered those works beginning about twenty years ago, and was there at intervals all through their construction, and one might say that the composition of lines and masses and the way in which the river worked into the great dams was one of the most magnificent and effective things he ever saw in his life. The work was finished now and the water was filled in, but it was well worth visiting if anyone happened to be in that part of the country. The masonry dams were treated in a plain engineering way—they were about 600 ft. across and 90 ft. to 100 ft. high. There were three of them and one of the dams was curved up stream to resist the thrust.

Mr. Flower
said in his paper that night Mr. Pennell had given the architects credit for the scaffolding, but he was afraid in most cases the architect left this to the contractor. That evening the author had jumped right from the Assyrians to Rembrandt, but there were a good many books from the twelfth to the fifteenth centuries in which illutrations of work appeared. In the "Nuremberg Chronicles" there was an illustration of the building of Cologne Cathedral and the buildings of some other towns which were purely imaginative. There were also illustrations of the walls of Jericho falling, and so on, which was not quite the work Mr. Pennell meant, but still it was work. There were also a good many illuminated missals in which were beautiful illustrations of the building of ecclesiastical edifices.

The President
said that perhaps the most interesting part of the evening had been the author's own drawings, and he wished that the School had been present, because the subject was a very stimulating one, and one which they as architects would have to recognise sooner or later as being a source of inspiration to themselves. They would learn in time that scholarship and craftsmanship alone or together were not sufficient to produce live modern architecture. Many years ago, when he first attempted to draw in pen and ink, he had a magnificent great volume given him called "Pennell's Drawing and Pen Draughtsmanship," which was a mine of information on technique and various matters connected with black and white illustration. Even in that book Mr. Pennell had a go at architects and said that no one in England could draw architecture at all. Mr. Pennell had had his knocks at them and they must try and return the compliment. Mr. Pennell always loved the romantic side of his work. Many years ago, when he (the President) was very young, he was in Normandy and was led by an illustration of Mr. Pennell's in a guide-book to take an arduous journey to visit a remote hamlet. Well, he had got over the disappointment now. But all students of architecture and draughtsmanship were indebted to Mr. Pennell for his wonderful work and his powers of composition and imagination. The things he had shown them of the Panama Canal were thrilling.

The motion was carried.

Mr. Pennell, in reply, said he had no doubt that when he wrote that no one could draw architecture in England it was true, but probably they had learned since. He thought Turner's architectural drawings were mostly beastly. Probably Turner was one of the persons who prevented them in England from drawing architecture properly because Ruskin said they were right; but they were not right. In comparison with Claude, Turner's architecture was ridiculous. He was not talking of Turner's water-colours, which he admired as much as anyone. He had visited the Birmingham Waterworks, but unfortunately they were finished. Still it was fine. The thing which struck him at Panama as being much finer than anything he had ever seen were the terrific walls of concrete. The wall was absolutely one sheer mass, and he had never imagined anything so fine. In America they were using concrete more and more and making magnificent effects with it. In railway approaches and viaducts and things of that sort the simplicity of the thing was wonderful. He had never looked into the "Nuremberg Chronicles," but would do so. The trouble about the missals was that, although the illustrations were beautifully done, the monks who did them had never seen the things they drew. He meant to have referred to Brangwyn, who had done some remarkable things, but unfortunately he had no slides of his works.

The President announced that a combined members' evening and ordinary general meeting would be held on March 30, at 8 p.m., at No. 18, Tufton-street. Two short papers would be read on the work of the late Messrs. Bodley & Garner and the late Mr. J. F. Bentley. There would be an exhibition of work by these architects. The result of election of officers and Council for Session 1914–15 would be announced.

Visits.

Mr. G. L. Elkington announced that the next spring visit would take place on March 28, to Roehampton House, Roehampton (architect, Mr. E. L. Lutyens, F.R.I.B.A.), and St. Serf's House; also gardens, etc., at Downshire House (architect, Mr. F. S. Chesterton). Members to meet at the Lodge, St. Serf's House (near Roehampton Gate, Richmond Park), Priory-lane, at 3 p.m.

FIFTH SPRING VISIT.

One of the most unpleasant afternoons of an inclement season did not prevent a good attendance of members visiting the Duchy of Cornwall Estate at Kennington on Saturday, March 14, for the purpose of inspecting the improvements in course of execution from the designs of Messrs. S. D. Adshead, F.R.I.B.A., Professor of Civic Design at Liverpool University, and S. C. Ramsey, A.R.I.B.A. The work now being carried out has attracted a great deal of attention both in the public and professional Press, and in endeavouring to arrive at a just estimation of its worth as a contribution to the solution of the housing problem, it is desirable to rely upon its displayed qualities rather than the somewhat extravagant writing which has been lavished upon it.

The flats, houses, and cottages already built certainly show a full appreciation of the factors of the problem and an honest endeavour to utilise everyday materials in a common-sensible way. There is an early nineteenth-century type of cottage, particularly common in the north-eastern districts of London from Haggerston to Bethnal Green, and the precursor of the back-addition house, since so disfiguringly prevalent in the outer suburbs, to which Messrs. Adshead and Ramsey have returned for inspiration. It has usually a small staircase hall and parlour in front, a living-room the full width of the site behind, with a one-story back addition consisting of scullery and water-closet; above are three bedrooms. This type is generally roofed with a V roof of pantiles and a central box gutter (all masked by a level parapet next the street) delivering roof water at the back only, and obviating any rainwater pipes or drains in front. It is a simple, serviceable type and obviously a town dwelling. This type, as adopted for the Kennington Estate, has been improved in many details, such as the provision of a ventilated larder and a lobby and coal store as part of the back addition, a convenient hot-water service, with a bath and table-top in the scullery, and useful cupboard accommodation in the living-room. In the construction modern methods are followed. The ground floors are of boarding treated with Mykantin rot-preventive, and nailed through a coating of bitumen to 2-in. of breeze concrete surfacing, the layer covering the site. The roofs are flat and covered with "Combinite" laid on boarding firred up to falls on the 7-in. by 2-in. ceiling joists, and protected with 2 in. of gravel. This method not only retains the advantage of the V roof in delivering all water at the back, but allows the parapets to be much reduced in height, and obviates the need of flashings to the party walls, since the flat roofing material can be carried through and the Building Act parapets built upon same. The architectural treatment of these houses adheres pretty closely to the original type, as may be judged from the illustrations reproduced in the *Builder* of February 20.

After inspecting the cottages in Courtenay-street and New-square, and the maisonnettes in Cardigan-street, a visit was made to the Houses for Old People now in course of construction on a cleared site slightly northward. This is a very interesting scheme, by which fifty-two tenements will be united in quadrangular form. Each tenement will contain a living-room with bed recess, one or two bedrooms, and a small scullery with water-closet, larder, etc. All the living-rooms look outward to the street, and the sculleries and entrances are towards the quadrangle, which is approached by a central archway on the south side, marked by a cupola. The quadrangle is 120 ft. across, and is surrounded by a broad colonnaded loggia with a balcony above, from which the first-floor dwellings are entered. Adjoining the entrance archway are caretakers' quarters, and at the angles of this south front two shops are being formed. At the north-east angle is a common bathroom, and, above it, a common laundry for the use of tenants. The floors of this building are of reinforced concrete, floated and covered directly with linoleum laid on mastic. The roofs will be covered with pantiles or Roman tiling, and special permission has been obtained to dispense with the ridiculous and unsightly parapet party walls, which, owing to the pitch roofing, could not be hidden here as in the case of the flat-roofed cottages. The architectural treatment of this square will be based on a slightly earlier type, rather less frigid than the cottages, and it certainly promises well.

The next buildings visited were the two blocks of flats forming the entrance from Upper Kennington-lane to Courtenay-street. These are already in occupation, and could only be viewed externally. Having regard to their position, these buildings and the shops with flats above now being built on the adjoining site, have been treated with less severity than the streets, and the use of Crowborough bricks with red gauged arches imparts a greater cheerfulness. The artificial stone dressings, however, are here of a very dingy hue, and much inferior to those used on the old people's tenements. It may seem vandalism to suggest it, but the appearance of these blocks would really be improved by a coat of paint on these portions of the structure—a treatment which use has familiarised us with in the original Adam work upon which it is based.

Two larger blocks of flats in Chester-street, at some little distance from the other buildings, were next seen. These are on a sober and dignified design, in the manner of the early nineteenth century, and the block already completed looks well; it is a great gain to the amenities of the estate to have all its new buildings designed with some relativity one to another, but it is unfortunate that a considerable amount of modern rebuilding and replanning was undertaken before apparently this was fully recognised. Before leaving Kennington members were kindly entertained at tea by Messrs. Adshead and Ramsey, who had conducted the party, and in the schoolroom of St. Anselm's Church the fine drawing of the new church which they are about to build (exhibited in last year's Royal Academy) was again viewed with interest. Their design is reminiscent of the early Florentine Renaissance, and recalls a simplified Santa Maria delle Grazie, Milan. The Vicarage, already built, has a fine simplicity and largeness of scale.

SCHOOLS, PADDINGTON, W.

Infant schools in connection with the Church of St. Mary Magdalene, Woodchester-street, Harrow road, W., are being erected from the designs of Messrs. Beazley & Burrows, Victoria-street, Westminster. The builders are Messrs. Sabey & Son, Ltd., St. Peter's-street, Islington, N.

THE SOCIETY OF ARCHITECTS:

BRICKS AND BRICKMAKING.

A MEETING of the Society of Architects was held on Thursday last week, when a paper on "Bricks and Brickmaking" was read by Mr. Arthur E. Brown, B.Sc.London.

After giving an interesting and complete sketch of geology and chemistry and physics of clay, followed by an account of the process of manufacture of clay, Mr. Brown gave the following description of various types of clay:—

"The clays that interest the brickmaker chiefly are the shales, marls, and surface clays. The Peterborough bricks, or Flettons, are made from an oily shale, another important centre using shale being Accrington. Shales are almost always made into bricks by the semi-dry process, although the plastic process may be used. I have already touched on this process, which is a mechanical one from first to last. In Peterborough, even the excavation of the shale is done with steam diggers on the largest works. The shale is brought straight from the bank to the machine, there to be ground to a granular condition.

It is screened mechanically to the required fineness, mixed mechanically with a small amount of water, if necessary, and then passed automatically into presses with rectangular cast-iron moulds for fashioning the brick. The pressing into brick form may be completed in one operation, or the brick may be pressed a second time to improve its finish. Water in small proportion is necessary in order to obtain the cohesion of the fine particles or grains of shale. From the presses the bricks are taken straight to the kiln, in which they are dried and burned in one continuous operation.

It is often stated that they are made dry and do not require drying. This is not true, but the amount of water in them is much less than in those made by plastic process, and they are sufficiently hard and strong to stack in position for burning direct from the presses. In the kiln they are dried first and burned afterwards continuously. In contrast to this, bricks made on the plastic system are too soft to be stacked in the kiln and must be dried first by one of the various means employed in the trade. The economy of labour in the semi-dry process over the plastic process is the chief cause of the cheapness of the brick made at Peterborough. Further causes are the price of coal and the fact that burning in the kilns is assisted by the oil contained in the shale.

Marls are found in several parts of the country, the chief beds being in North Wales and Leicestershire. They are so called because of the presence of carbonate of lime in varying quantity.

Carbonate of lime or chalk has this peculiarity in connection with brickmaking, that when present in lumps or nodules it is exceedingly dangerous and destructive, unless effectively ground up or eliminated, but when in a fine state of division it is harmless. Marls rarely contain more than 5 per cent., but they require very careful selection and treatment, even when the proportion is much less.

The carbonate of lime when not finely divided becomes converted in burning into quicklime, which slacks when the bricks absorb moisture from the air, with the result that the face becomes pitted through the lime blowing pieces off the face. Yet clay exists containing as much as 40 per cent. of carbonate of lime that may be made into sound bricks. The white Suffolk brick clay sometimes contains this proportion, and the Cambridge gault contains 33 per cent. The London stock brick clay contains 15 per cent. It is, however, in such a fine state of division and so intimately mixed with the clay and sand that it forms harmless chemical combinations with them when burned. Marls are plastic clays, and, in common with the Reading gault and surface clays, when made into common bricks are treated by the wire-cut system of brickmaking. I can, therefore, give you a short description of this method of manufacture as applied to these types of clay without referring specially to each. The clay is dug and conveyed in wagons usually by a suitable hoist direct to the machinery. This may consist of a brickmaking machine only, or preferably a train of machinery which gives a thorough preparation to the clay before it is finally pugged. This machinery may consist of all or either of three types.

The grinding-pan, resembling a mortar mill, is useful in working up a sandy non-cohesive

clay to a more plastic condition than it possesses in its natural condition. The bottom of the pan is perforated in parts, and the rollers squeeze the clay through the perforations, causing it to drop into the next machine. Again, the clay may instead be passed through one or more pairs of rollers running at different speeds. These crush the clay, and any stones or lime contained in it, and at the same time tear it slightly by reason of their different speeds of running. From the pan or the rollers the clay may pass to a third type of machine, the mixer. This may be open or closed and have one or two revolving shafts. On the shafts are knives so inclined as to push the clay forward and mix it at the same time. The mixer may be about 6 ft. long and horizontal in position. From the orifice at the end the clay drops into the hopper of the brickmaking machine. If required, water is added to the clay either in the pan or the mixer, but never in the rollers, as it would cause the clay to slip. The brickmaking machine usually has a small pair of rollers mounted on it through which the clay is forced into the barrel. This, again, is horizontal, and is furnished with a single shaft, and pugging knives similar to those in the mixer. These knead and compress the clay and press it towards the mouth of the machine. At the end of the shaft a worm is placed which pushes the clay through the mouthpiece, and die and forms it into a continuous rectangular column of the correct cross-section. The dimensions of the cross-section correspond with the length and width of the brick, allowance being made for the shrinkage in drying and burning about which I have already told you. The column of clay is now finally cut off by wires drawn transversely through it, the wires being spaced the necessary distance apart to give the correct thickness of brick. From the cutting table the bricks are wheeled to the drying ground, shed, or other apparatus in order to be thoroughly dried before being stacked in the kiln for burning. This, briefly, is the routine of the mechanical plastic process. There is another intermediate process called the stiff-plastic which is used for some common brick clays. It is not of great interest, and need not claim your attention.

I now have, therefore, to give you finally some description of the older process of hand brickmaking, which holds its own in certain parts of this country, in spite of the great improvement of machines in the last thirty years. It is the process used in the days of the Babylonians, Egyptians, and Romans, and was that used by the first brickmakers in England up to the middle of the nineteenth century. It is to all intents and purposes the process used for all artistic terra-cotta making, in which mechanical aids are almost useless. Yet, strange to say, it is looked down upon with scorn by the countries far advanced in mechanical appliances, Germany and America, while it is practised almost exclusively in Belgium and Holland, and largely in France. The hand brickmaking process is used for making stock bricks and red facings. The clay is usually prepared for making by weathering—that is, by being spread out in layers in the open air, so that air, rain, and frost may in turn act upon it and loosen it after its long confinement in the natural bed.

Weathering is practised, as well as what is termed resting, on other clays, and, although the effects of it are apparent and the causes guessed at, no definite knowledge has been obtained as to the reason it is so efficacious. Stony clays for hand-making are also washed, but those found free of stones do not usually need it. The weathered clay is pugged or ground, usually in vertical pugmills driven by horse or steam power. These mills are essentially the same as the horizontal ones previously described, and serve to mix the clay and incorporate the water, and finally expel the mass in a condition fit for moulding. Steel or wood moulds of the required size are wetted and rolled in fine dry sand and placed in position on the moulder's table. A "walk" of clay, as it is called, is then made by the moulder and rolled into a shape suitable for throwing into the mould. This walk is dexterously rolled in dry sand and, when ready, thrown with some force into the mould. The excess of clay is then struck off and the finished brick dropped carefully from the mould on to a pallet.

The final result and effect depends on a variety of circumstances. The surfaces of the brick may be fine and uniform, or they may be wrinkled and coarse. The brick may be true and square or out of shape and deformed. These effects are due to the idiosyncrasies of the moulder, who requires training carefully in the way he is wanted to go. The final colour and appearance depend on the quality of the clay and sand used, the kind of kiln, the method of firing, and the final temperature and soaking; all matters requiring constant care and much technical knowledge.

The drying is an operation also requiring unremitting attention, and all the various materials, operations, and skill combine to yield the final product, which may or may not produce adequate returns according to the demand and the success of the master in supplying it. From all of which you will gather some further confirmation of a remark I made earlier in my lecture, that the paths of the brickmaker are thorny and by no means so easily trodden by a novice as some would be disposed to think. The processes used in hand brickmaking are such as to afford to the clay the most perfect treatment from a physical point of view.

The weathering, the slow pugging, the lengthy and complete drying, all tend to assist the clay molecules to adapt themselves to the altered conditions they encounter in their drastic change of state. At the same time, the ultimate result is not only sound physically, but it is in the highest degree artistic and durable, provided the processes of manufacture are all properly carried out. It is durable under all circumstances of environment; water, frost, sun, and fire, all alike leaving it unharmed and unchanged. That this is so the old examples of brickwork in East Anglia and elsewhere eloquently testify.

We all know that brickmaking as an art is ancient and even prehistoric. The earliest bricks found in Egypt are said to be 12,000 years old, and we are often reminded that the Children of Israel had to make bricks for Pharaoh and find their own straw. These bricks were made of Nile mud mixed with chopped straw and the clay was trodden by men, much as it was up to quite recent times in this country. The bricks were moulded and sun-dried, but not baked, and would have been of little use in our climate. They were hard and served to build lasting monuments in that arid country. The well-known Step pyramid of Sakkara is built of such bricks, and was cased externally with marble slabs, now removed. It is the oldest pyramid in Egypt.

It is said that the Tower of Babel was built of brick, the record being that the builders said, "Go to, let us make bricks and burn them thoroughly." The walls of Babylon were built of bricks, and from the ruins the bricks have been carted away in modern days to build new cities. The burned ones were 13 in. square and 3 in. thick, and the unburned ones of various sizes, and they were set in bitumen.

The great wall of China was built of burned and unburned bricks 2,000 years ago. It was 1,250 miles long and about 22 ft. high.

The walls of Athens, on the side of Mount Hymettus, were of brick, but the Greeks did not use them so much as the Romans, who were probably the first to burn them in kilns and to improve their quality.

In the first century A.D. they were of better quality than at any subsequent time, being then made about 2 ft. square and 1 in. thick. Later they were made smaller and thicker, but by the end of the fourth century the art was practically lost until about the thirteenth century.

The glazed brick used by the Saracens in what is known as the Synod at Ephesus is interesting as being practically of the same clay as a red Suffolk brick and finished with a green glazed surface.

In England, as you well know, the Romans introduced bricks and brickwork in the fifth century, an example still remaining in Holy Trinity, Colchester. Colchester Castle, built in 1078, is largely of Roman bricks, and also St. Botolph's Priory, built in 1116. The British people did not find the need of building in brick until the late thirteenth and early fourteenth century, because of the immense forests and abundance of wood, but they used clay as a filling between wooden external walls and board linings.

Little Wenham Hall, built in 1260, is the earliest British building, the bricks being 9¾ in. by 2¾ in. by 2¼ in., and mixed with courses of stone and flint. These and many of the bricks used in the Tudor period were probably imported from Holland, an unpatriotic practice which has very unfortunately been followed in the last few years again.

The fifteenth-century Tudor brick is quite equal in quality to the Dutch bricks imported recently into England; but I think, and I hope you will agree with me, that neither can be compared in quality with modern examples of English bricks of the same size. In Tudor times bricks cost 6s. per thousand. They varied a good deal in size from time to time, some being 12 in. by 6 in. by 3 in., others 9 in. by 4½ in. by 1¼ in. In late Tudor times terra-cotta began to make its appearance, such as is found in Wolterton Manor House, East Barsham, built in the time of Henry VII.

From Tudor times through the Renaissance period bricks continued to be used, and after the Fire of London in 1666 brick was generally used in the rebuilding of the City. Late in the eighteenth century, and up to the middle of the nineteenth, bricks were taxed from 4s. 6d. to 10s. per 1,000, and during this period their use for facing work declined, stucco taking their place.

A great revival, however, occurred when mechanical manufacture became prevalent, and since that time one of the greatest booms in the use of bricks was witnessed in the revival of the Queen Anne style of architecture in the seventies and eighties. This was followed by the mushroom growth of the Fletton brick industry in the nineties, and a marvellous activity in the building trade about 1900, when bricks were in such demand that they fetched famine prices.

The Transvaal War put an end to this activity, and for the last ten years such dullness has characterised the trade that I do not think more than one-third the number of bricks have been made annually in the Fletton and stock brick districts, which supply London. Large sums of capital, too, are lying idle in many districts, because of the undue haste with which it was expended during the boom.

You do not require to be told of the present vogue for the use of bricks of the Tudor type for facing buildings of all kinds. The genius of many of our greatest architects has found expression during the last few years in this ancient material in work that is characterised by greater variety and charm than is to be found in any previous style, and I am sure no other country can show bricks or brickwork to compare in artistic excellence with that which has arisen in London recently, or in the garden cities around it."

LONDON AND THE LONDON SOCIETY.

On February 26 last Mr. D. B. Niven delivered a lecture before the Architectural Association Camera, Sketch, and Debate Club, entitled "London and the London Society." In the course of his remarks Mr. Niven said in November, 1910, a Town-Planning Conference was held which proved a great success. This was in reality the parent of the London Society, and the knowledge then disseminated ultimately ended in the formation of the London Society in 1912. The Society now comprises a formidable list of Vice-Presidents, a Council of thirty, a Parliamentary Committee, an energetic and hardworking Executive, a satisfactory financial position, permanent staff, and place of abode.

The object for which the London Society was founded was to draw together all lovers of London. London is the greatest city in the world; it now occupies 600 square miles, has 2,000 miles of streets, 600 miles of railroad, and over 600 railway stations, and yet it is behind all great Continental and American cities. The aim of the London Society is to carry out improvements which, it is hoped, may be made very definite and for the lasting good of this great city. The methods consist in supporting every good proposition and pointing out what is bad in all ill-considered proposals. The study of this vast, complex, and wonderful city is one which would particularly appeal to young architects. It is by no means necessary to wipe the slate clean before we can start again to restore London; neither is it necessary to make it like Paris or any other city. London possesses a character of its own, one which we all must appreciate.

Who has ever entered London by the railway bridge to Charing Cross and not been impressed by the sweep of river and the fine lines of the embankment, with its edging of green trees, partly revealing many noble buildings? All

this is very delightful, but we who know London are assured that by merely turning our heads we have in view mud, warehouses—some of them dilapidated and in black decay. The City of London, studded as it is with Wren's beautiful churches and dominated by its great dome, can never be commonplace, yet its streets are narrow and tortuous. London's population is about 7,000,000, which increases 20 per cent. every ten years. It is not generally known that Napoleon, when exiled at St. Helena, amused himself by planning improvements in London. He would make, he said, a great road from St. Paul's to the Thames, and side streets against the Thames, one on each side of the river.

The London Society is collecting information on open spaces. A Southern Committee is dealing with improvements on the south side of the river and considering the question of bridges.

Architects are the backbone of the London Society, and should help in the planning and improving of this great city. The London Society showed a revival of good citizenship and a better civic spirit. When we have a great plan prepared we shall start improvements from the circumference, the difficulties and cost increasing as we approach the centre.

Connecting together the radial roads which enter London would enable the non-London traffic, which before had to pass through London, to skirt the town.

Mr. H. B. Tunnard

proposed a vote of thanks to Mr. Niven, and remarked on the great interest of the paper. He thought that if ever the most important railways in London were electrified—a hope Mr. Niven had expressed in his paper—it would improve London to a very large extent.

Mr. A. G. R. Mackenzie

seconded the vote of thanks, and said that he thought it was generally agreed that it was very difficult to get out of London by its present roads, and if its main stations were on an outer zone the existing railway roads would make very good traffic roads out of London. He was particularly struck, in comparing London with any foreign city, with what little use was made of the river. It is only noticed when entering London from the south side, and then only after miles of uninteresting small streets and houses. He was very interested in the Report of the London Society with reference to the south side improvements. He would like to ask Mr. Niven if it was proposed that there should be a bridge to correspond with Waterloo Bridge at the eastern arm of Aldwych.

Mr. H. J. Leaning

(the original Hon. Secretary to the Society) supported the vote of thanks, and pointed out that Mr. Niven had, in his modesty, carefully concealed the fact that he himself called together the original meeting out of which the Society grew. He thought Mr. Niven a most valuable asset of the Society, as he was overflowing with ideas, engendered, he supposed, by that "noble discontent" which is the cause of all improvements in the environment of human beings. Now that the Society was so firmly established the prime-movers were a little astonished at their intrepidity in attacking such a vast problem, but were much encouraged by the instant recognition which they had received, not only from the Press, but from their far-seeing supporters, who had so generously enabled them to organise in a manner worthy of the cause. He thought much of its success might be attributed to the fact that it was non-political and entirely disinterested, and he hoped before long that, with the present awakening of the Civic conscience, which was evident on all sides, no one who took any interest whatever in London's future would fail to become either a member of the Society or a subscriber to its *Journal*. The Society had been accused of creating expensive tastes and of doing nothing to supply funds wherewith to satisfy them, and that, of course, became the most urgent problem of all. There were many solutions possible, and the Society was hard at work collecting information with regard to the possible sources of improvement funds, and facts relating to such sources in foreign cities. Such questions as the relative possibilities of the application of the principles of betterment and recoupment were being analysed, also the facts relating to the shortage of London's revenue (so well known to politicians), due to the fact that London carries out various imperial services for which she does not at present receive a proportionate Exchequer grant. This shortage amounted to £1,000,000 per annum, or sufficient to raise a sixpenny rate. The relations between the Road Board and London were also ill-defined, and at the moment it seemed somewhat difficult for them to agree as to the destination of the proposed grants. As an instance of the manner in which business men approached similar problems, he instanced the action of the Automobile Association with regard to the formation of a 50-ft. road around London for the greater convenience of its members. The Association had approached thirty-six local bodies with an inquiry as to whether, when funds permitted, they would agree to carry out widenings along certain roads in accordance with a scheme submitted, and they had received favourable replies from thirty-two of them. There was a great deal now to be done in the development of the ideas of the more active members of the Society, but its present resources did not enable it to maintain a staff of trained workers who might be constantly engaged upon them. He hoped, however, that that deficiency might soon be remedied by the beneficence of some public-spirited citizen gifted with prophetic vision and discernment. Such a man might earn the lasting gratitude of future generations by stimulating those ideas, which, as Mr. John Burns so well said, are far more important and valuable than either money or authorities lacking such ideas.

Mr. Horace Cubitt

said that mention had been made of the beauty of London. About the finest sight within his remembrance was the line of the Embankment, terminated by the Houses of Parliament, as seen by him one particularly clear evening through one of the arches of Waterloo Bridge. As regards the question of administration, while a case could be made out for one comprehensive authority dealing with all interests affecting London, such concentration of administrative powers was hardly probable, and might not prove too satisfactory from the standpoint of the individual when subject to such centralised control. The question of the remodelling of the south side had almost become a matter of practical politics, and a good deal of credit for this must be given to the London Society, of which, as doubtless all were aware, Mr. Niven was one of the founders. The question of new bridges across the river was closely connected with the development of the south side. In the construction of such bridges advantage ought to be taken of modern mechanical improvements, and it seemed to him quite feasible for the new bridges to have moving footways, on the same principle as the escalators in the Tube railways, by which means the time taken by foot passengers in crossing the river would be much reduced.

The Chairman (Mr. P. H. Adams),

before putting the vote of thanks, said he quite agreed that the best way of entering London was by night, anyway for the "intelligent foreigner," to whom it was desirable to give a favourable first impression—or comparison with what he had left behind—but, after all, were not many of the differences he might afterwards observe be attributed to those existing between autocratic as against democratic municipal government? In Berlin, for example, where the "committee of taste," culminated, he believed, in the Emperor himself, as in the Sieges Allee; on the other hand, democracy might, roughly speaking, claim the open spaces. Few cities, for instance, can surpass London in this respect; certainly not Paris. He quoted the Alameda of Lisbon as one of the finest avenues in the world, and particularly applicable to the consideration of a southern approach road to the new St. Paul's Bridge. The Queen Elizabeth's scheme for the laying-out of London was interesting especially in the light of modern developments: for instance, in the city of Adelaide, South Australia, which was one mile square divided up by avenues of varying widths, but nearly all with trees in them, and encompassed by a belt of park-land a quarter of a mile wide, which the main avenues passed and were continued through the suburbs into the open country beyond. On the question of the advisability of putting all suburban railways underground, he did not altogether agree that this even was either pleasant for the passengers or even desirable. The overhead railways in New York had gained a bad reputation, but anyone who had seen how they were arranged in Berlin, in the centre of broad avenues with gardens under and on each side, might find that impression removed.

The Chairman having put the formal vote of thanks, Mr. Niven replied.

ARCHITECTURAL SOCIETIES.

Sheffield Society of Architects and Surveyors: French Architectural Tour.

"An Architectural Tour in Central France and Burgundy" was the title of an instructive lecture given a few days since by Mr. W. S. Purchon before members of the Sheffield Society of Architects and Surveyors at the University. The lecturer described a tour arranged last year as a summer vacation course associated with the Department of Architecture at the University. The places visited were Troyes, Sens, Villeneuve sur Yonne, Auxerre, Vézelay, Avallon, Semur, Dijon, Beaune, Tournus, Paray, Autun, Nevers, Bourges, Blois, and Chartres. Mr. Purchon dealt with a number of important buildings which were studied in the various centres visited. Good examples of Roman work, he said, were seen on the tour, showing how mediæval detail was gradually evolved from it. They saw something of that great struggle with structural difficulties which led to the glories of the thirteenth century, and learned that the mediæval builder was not a mere copyist of earlier work, but endeavoured to solve the special problems put before him. They were charmed with the playful fancies of the time when the architects turned again for inspiration to Classic examples, and were impressed with the beautiful proportion and quiet dignity of some of the work of the later Renaissance, and from Baroque and Rococo examples they were able to appreciate the value of restraint. The lecturer drew attention to the western wing of the Château at Blois (1635-40), which he instanced as a triumph of the Italian forces—not quite complete perhaps, for the steep roof was still retained, but the exact symmetry of the design and the "correct" use of the Orders show that mediæval ideas had given way before the onslaught of the rules and regulations of the later Renaissance. He referred to this as "part of a great movement, for people were getting more formal in their conversation. At the present time an attempt is being made to run a formal movement in architecture against the current, for in all branches of art, and in life itself, we are getting less and less formal." Of the modern work some called for admiration, while other specimens drew attention to the necessity for hesitation before English architects plunged recklessly into the copying of French methods. In some of the small towns visited the students were particularly struck by the retention of the mediæval spirit, and in others by the town-planning schemes.

The President, Mr. A. F. Watson, was in the chair. A vote of thanks was accorded, on the proposition of Mr. Horace Wilson, seconded by Mr. C. F. Innocent and supported by Dr. Scurfield, and Messrs. W. J. Hale and J. R. Wigfull, the latter of whom referred to a tendency at the present time to belaud the doubtful beauties of stucco and the tame and commonplace work executed by the architects of the early part of the last century.

Glasgow Institute of Architects.

At a meeting of the newly-elected Council of the Glasgow Institute of Architects, held in the Art Club, Bath-street, the following office-bearers were elected:—President, Mr. John Watson; Vice-Presidents—Messrs. James Lochhead, James Lindsay, and John Fairweather; Auditor of Professional Accounts, Mr. A. N. Paterson; Secretary and Treasurer, Mr. C. J. MacLean, writer, 115, St. Vincent-street. The Standing Committees for the ensuing year were also appointed.

The Queensland Institute of Architects.

At the general meeting, on the 9th inst., of the Royal Institute of British Architects, the Chairman announced that the Council, acting under By-law 78, had admitted the Queensland Institute of Architects to alliance with the Royal Institute. The affiliation of the Queensland Institute completes the alliance with the

parent body of the architectural societies of all the continental States of the Australian Commonwealth, and, with the Royal Canadian Institute, the New Zealand Institute, and the three South African Institutes, the Royal Institute of British Architects now possesses an organisation which may be said to embrace practically the whole of the self-governing dominions of the Empire.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. Cyril Cobb, Chairman, presiding.

The first business of the Council was to elect officers for the ensuing year, and Viscount Peel was elected as Chairman, Mr. A. O. Goodrich as Vice-Chairman, and Mr. H. E. A. Cotton as Deputy-Chairman.

Tenders.—Tenders were received for the adaptation of classrooms as workrooms at the Fleet-road School, Hampstead, and the Capland-street School, Marylebone; also for boilers and low-pressure hot-water heating at the Capland-street School; the Gipsy-road School, Norwood; and the Lower Chapman-street School, St. George-in-the-East.

Loans.—The Finance Committee recommended that loans be made to Borough Councils as follows:—£10,850 to Islington for repaving works and £11,925 for electricity undertaking, £9,248 to St. Pancras for electricity undertaking, and £1,900 to Woolwich for sewers.

New School.—It is proposed to erect a new school for 1,124 children to replace the Caledonian-road School, Islington.

Embankment Widening.—The Improvements Committee recommend that the Albert-embankment be widened for a distance of 1,230 ft. from its present width of 60 ft. to 80 ft. It is estimated that the scheme will cost £40,200, including £27,550 for purchase of the land. This scheme was unanimously agreed to.

Theatres, etc.—The Theatres and Music Halls Committee have approved the following drawings:—Cinema de Paris, Bear-street—electric and gas light installation for new entrance from Charing-cross-road; Great White City—Anglo-American Exhibition, 1914—arrangement of buildings, Nos. 8, 9, 19, 21, 23, 24, 28, 40, 41, and 42; 146, High-street, Clapham—proposed boiler-room and proposed heating, ventilation, and lighting schemes; Middlesex Theatre of Varieties—provision of a new dressing-room; Mitcham-road, Tooting—ventilation and electric-lighting arrangements; Royal Agricultural Hall—alterations to the refreshment department and lavatory accommodation; St. George's Hall, Langham-place—new dimmer installation; Victoria Palace—alteration to the booking-office.

ARCHITECTURE AND THE STAGE.

AT the Empire a capital programme is given which includes a ballet entitled "The Dancing Master," an early Victorian tableau admirably staged in very appropriate surroundings, which afford a good setting to the quaint costumes of our grandfathers. M. Pirouette, the Maître de Ballet, is admirably acted by Espinosa, whose dancing and that of Miss Phyllis Bedells, who plays the part of Mlle. Mimi Lafleur, a débutante, is altogether excellent. The Revue "Nuts and Wine," arranged in five scenes, also gives opportunity for much clever acting and dancing, and is very well arranged and staged. The spectacle of new Eton given up to agriculture instead of sport afforded much amusement to an audience who were not entirely composed of supporters of our present Government. The second scene of the Revue, which represented "Ellis Island," Aldwych site formed an appropriate suggestion to the County Council, and one which in the interests of Londoners they might carefully consider. Why should not all the institutions which annoy us be removed to the vacant site? If we could only localise telephone grievances, post-office annoyances, and architectural monstrosities to this one spot, we should all be happier. The third scene, representing the New Little Theatre, a theatre within a theatre, and the fourth scene, the New Empire Stores, were all excellent in design and execution, and afforded a good background for much admirable fun, artistic costumes, and beautiful dancing.

In our columns of fifty years ago we refer to the hastily conceived staging of that period, an accusation which cannot now be employed even to our music halls, which more than keep pace with the contemporary advance in architecture.

At the St. James's Theatre "The Two Virtues," a play by Mr. Alfred Sutro, is given, which affords Sir George Alexander and Miss Martha Hedman a good opportunity for the display of histrionic talent. We have a library scene with a vengeance, the library being surrounded with a businesslike iron gallery where the amateur historian, Jeffery Panton, keeps his treasures, and Mrs. Guildford's Chelsea house shows that she possesses good taste and selection. The play is well composed and effective, and illustrates the foibles, insincerity, and affectation of the smart set and the unconscious humour of its doings. We may hope that Society will rise in its general excellence to the critical taste it shows in costumes and choice of surroundings. If so, it will leave little to be attacked with success by the Fourth Estate.

GENERAL NEWS.

Appointment.

Mr. Herbert W. Heap, A.M.Inst.C.E., architect and surveyor, of Grimsby, has been appointed Surveyor to the Scunthorpe Urban District Council.

A Sixteenth-Century Goldsmith's London Shop.

A curious discovery was made about a year ago near St. Paul's of a large collection of gold and silver smith's work, which, it seems, formed the buried wares of a shopman in the time of Elizabeth or her successor. Some of the articles of jewelry are now displayed in the British Museum Gold and Gem Room. These consist of three finger-rings set with sapphires, emeralds, and other precious stones, a jewelled and enamelled pendant of gold, and a small gold ornament, enamelled, and in shape of a caduceus. We learn that the remaining articles will be exhibited in the London Museum, Stafford House, to be opened on March 23.

Geffrye's Museum of Furniture, Kingsland Road.

The London County Council will soon open an exhibition, mostly of furniture, in their museum, formerly the Ironmongers' Company's Almshouses, in Kingsland-road, Shoreditch, which they have adapted as a museum devoted to the staple industry of the locality. Some of the exhibits have been rescued from demolished houses by the Council, and include two seventeenth-century doorways from George-street, Westminster, and Horsleydown-lane, Bermondsey, and the fine coeval window-bay from Lincoln's Inn-fields, with some fine old English door-knockers, stair-balusters, locks, and similar articles. Many exemplars are lent by the Corporation of the City, the Victoria and Albert Museum, and private individuals. The foreign specimens comprise handsome seventeenth-century Italian, Spanish, and Portuguese chairs; there are also carved mantelpieces, Stuart bedsteads, spinning-wheels, and an old coffin-stool.

Prudential Assurance Company, Ltd.

The sixty-fifth annual Report of this company has just been issued, in which it is stated that the number of policies issued during 1913 was 71,359, assuring the sum of £6,849,224, and producing a new annual premium income of £425,717. This is for the ordinary branch. The six Prudential Approved Societies formed under the National Insurance Act still continue to increase their membership, and during 1913 a sum of £1,401,360 was distributed to members. The company has also issued its Valuation Report for 1913.

American Art at the White City.

A comprehensive collection of works of art by United States artists will be seen in London when the Anglo-American Exposition opens in May at the White City, Shepherd's Bush. To ensure a thorough representation of Anglo-American art, four committees of experts are at work. At the head of the British Fine Art Section is Mr. J. J. Shannon, R.A., with Sir George Frampton as Vice-Chairman, while Sir Edward J. Poynter, President of the Royal Academy, is a member of the Executive Committee of the Exposition of which the Earl of Kintore is Chairman. In the United States eight of the leading artists, with Mr. Hugo Reisinger as Commissioner, are concluding their labours. In Paris twelve authorities are assembling specimens of work done by American painters resident in all parts of the Continent, and Mr. J. S. Sargent is Chairman of the London-American Committee, with Mr. Joseph Pennell as Hon. Secretary. A feature of the United States Section will be a display of architectural drawings revealing the skyscraper in art, and a gallery is devoted to original coloured and black-and-white drawings, which have been made for American magazines and other periodicals. The official portrait of President Wilson, destined to adorn the White House at Washington, has also reached the White City. This painting is the work of Mr. S. Seymour Thomas, of New York.

Discovery of Tudor House.

What is described as a magnificent specimen of Tudor architecture has (says the *Times*) been accidentally brought to light at Colchester. The Red Lion Hotel, the town's most ancient hostelry, is at present in the hands of workmen, and the removal of a portion of the plaster on the front of the building revealed some fine architectural work of the Tudor period. Further investigations were made, the hotel being stripped of all its plaster for the purpose, and many fine old oak beams and a wealth of carved panelling were disclosed. An ancient axe was found embedded between two laths over a mantelpiece, the blade consisting partly of iron and partly of steel welded together. The front of the hotel is decorated with some beautiful oak carved panels in a good state of preservation. The hope is expressed that a complete restoration of the building may be carried out.

Musée Jacquemart-André, Paris.

Arrangements are made for opening to the public, in accordance with the donor's wishes, the Musée of Art which the late Mme. André (*née* Jacquemart) bequeathed to the Institut de France. These well-nigh priceless collections were gathered by herself and her husband, M. Edouard André. She also left to the Institut her house, No. 158, Boulevard Haussmann (wherein three salons are decorated with works by Tiepolo, from the Villa Contarini, Venice), and a capital sum of 5,000,000 francs for its maintenance, as well as her country seat at Châalis, and the "Désert d' Ermenonville"—a park made after an English manner by the Marquis de Girardin, with another 5,000,000 francs for its upkeep. The collections comprise many works by French and English painters—Greuze, Watteau, Chardin, Fragonard, Nattier, Lancret, and others; Reynolds's portraits of the tenth Earl of Huntingdon, and Mrs. Buchanan McMillan; Hoppner's of Mrs. Inchbald, and Raeburn's of Lady Stanhope; busts of Mirabeau and André Chénier by Houdon, with many portrait busts by Couston, Lemoine, Coysevox, and Pajou (Diderot, Franklin, Washington, etc.); examples of Rubens, Van Dyck (including "Time Clipping the Wings of Love"), Rembrandt (portraits of the lawyer, Tholinx, and of Saskia van Uijlenburgh, and the "Christ and the Disciples at Emmaus"), and three portraits by Franz Hals; also works by Canaletto and Guardi, Moroni, Mantegna, Botticini, Titian, and many Italian masters. The category extends to a vast variety of *objets d'art*, such as jewels, ancient bronzes, majolica, Limoges enamels, Sèvres and Asiatic porcelain, tapestries, sculpture, furniture, bookbinding, and MSS. M. Émile Bertaux has been appointed curator of the Museum.

FIFTY YEARS AGO.

From the *Builder* of March 19, 1864.

Belgium.—The Guild of St. Thomas and St. Luke offer £12 (300 francs) for the best design for a village church, Early English in style, and to cost not more than £2,600. The conditions may be had at our office. Our countryman, Mr. James Weale, Bruges, acts as Secretary to the Guild.

[**** We do not hear now of foreign nations asking for Early English designs, which may be a reflection on our architecture, or, on the other hand, may be due to the greater appreciation of home productions, for there is no tariff on design!—ED.]

ILLUSTRATIONS.

The Duomo, Trani, Italy.

THIS is one of a series of excellent photographs of architectural work of interest in the south of Italy which, we think, will be of interest to our readers, as few of us know much of the Italy which lies to the south of Rome and Naples.

"Threeways," Wellgarth-road, Hampstead.

WE are glad to illustrate this small house, which we consider shows the possibility of treating our smaller buildings with dignity without falling into the error of ostentation. Mr. Charles Cowles-Voysey, A.R.I.B.A., is the architect.

No. 1, Dean Trench-street, Westminster.

THIS house was built last year by Messrs. L. & W. Whitehead for Capt. R. H. Adeane on a site at the corner of Dean Trench-street and Tufton-street. There were objections on several scores to a basement story, resulting in the occupation of practically the whole of the ground story by the kitchens, etc., reserving only the entrance and vestibule. The suite of reception-rooms occupies the first floor, with bedrooms above.

The elevations, as originally proposed, were modified on the demand of the landlords, who considered the simple treatment desired by the architect and his client to be inharmonious with the new houses in the neighbourhood. There were to have been plat-bands instead of cornices above the third story and in the pediment, and the general character of the work would have been more suggestive of that of the end of the eighteenth century. The materials used are brown stock bricks with red gauged brick arches, Portland stone, and red pantiles. The woodwork is painted white. Internally the detail is frugal but delicate; the sitting-rooms contain old firegrates of late Georgian character.

The drawing reproduced was exhibited at the Royal Academy with other recent work of the architect, Mr. H. S. Goodhart-Rendel.

House at Goring.

THIS house is on a hill to the north of the Thames Valley with a view to the west. It is built of Bath stone and flints. The flints are left unknapped. The roof tiles and chimney bricks are from Messrs. S. & E. Collier, of Reading. The general contractors for the work are Messrs. Benfield & Loxley, of Oxford, and the lead glazing and plumbing work has been done by Messrs. Wenham & Fowler, of Croydon.

ERNEST NEWTON.

House at Dorking.

THIS house is on a site which slopes somewhat sharply to the south. The facing bricks are from Messrs. S. & E. Collier, of Reading, and the roofing tiles are sand-faced, hand-made, Nyewood tiles.

The general contractor for the work is Mr. E. C. Hughes, of Wokingham. The lead glazing and plumbing work is by Messrs. Wenham & Fowler, of Croydon.

ERNEST NEWTON.

The Little Theatre.

IT having been found by the lessees of the Little Theatre that accommodation for seats of a cheaper class was desirable, the work of inserting a balcony was taken in hand during the summer of 1912.

The seven original boxes and the cinematograph chamber, etc., were demolished, the roof raised, and four new boxes, with a balcony over, were inserted in their stead.

This work was done at a very trifling sacrifice of seats on the ground floor. The new balcony has seating accommodation for eighty-eight persons, the seats provided being facsimiles of those on the ground floor, so that, although the prices in this part of the house are less, the seats are as good, and the view of the stage from every one of them is free and uninterrupted. This portion of the house has also been provided with a lavatory and sanitary accommodation for both sexes, and there is a small room intended for refreshments, but this has not actually been put to this use up to the present.

The four new boxes are capable of being turned into one, if desired, and a new entrance to them has been arranged from John-street. By this means Royalty can be better accommodated than before, and also have quiet access when patronising the theatre. A new "arc perch" has been formed in the roof over the centre of the auditorium, and the light can be easily projected from this point on to the stage. The access to this "arc perch" is from outside, entirely independent from the auditorium.

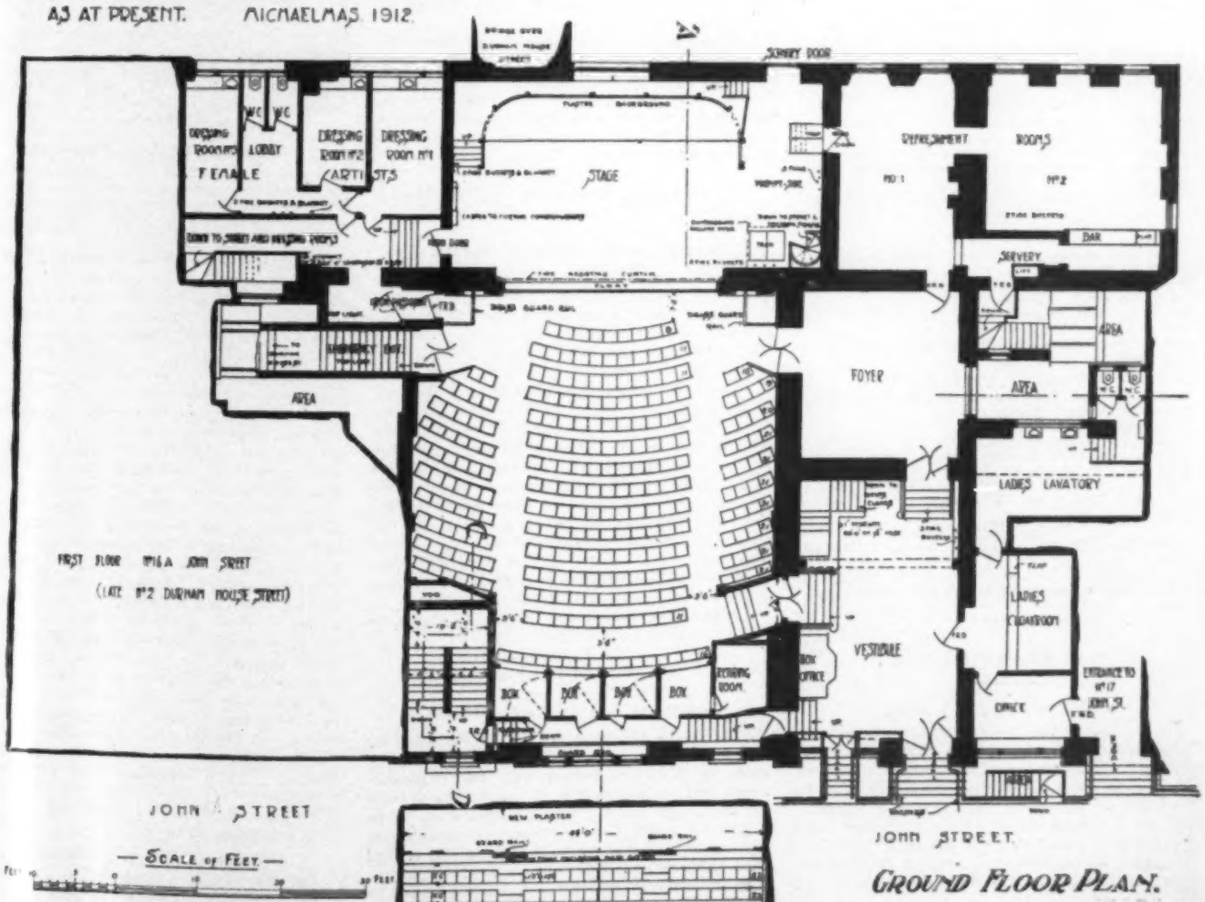
The whole of the auditorium was at the same time redecorated, the Adam style of the decorations being retained, however, throughout, as in the first instance.

The general contractors were Messrs. Bovis, Ltd. The subcontractors being as follows:—Steelwork, Messrs. H. Young & Co.; fire extinguishing apparatus, Messrs. Merryweather; electric lighting, heating, and ventilating installation, Messrs. Strode & Co.; ornamental plastering, Messrs. G. & A. Brown & Co., Ltd.

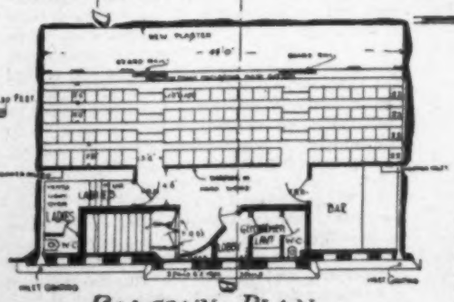
The work was carried out at the expense of the freeholder, Mr. G. J. Drummond, in accordance with the designs and under the superintendence of the architects, Messrs. Hayward & Maynard.

"THE LITTLE THEATRE," ADELPHI, W.C. (LATE COUTTS OLD BANK)

AS AT PRESENT. MICHAELMAS 1912.



GROUND FLOOR PLAN.



BALCONY PLAN.

Messrs. Hayward & Maynard, A.R.I.B.A., Architects.

Offices in Westminster.

THESE offices are being built in Tufton-street facing, down Dean Trench-street, the church of St. John, Westminster. The materials are brown stock bricks with Portland stone dressings, the window arches being of gauged red brick and the roofs covered with black pantiles.

H. S. GOODHART-RENDEL.

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MEETINGS.

FRIDAY, MARCH 20.

Institution of Mechanical Engineers.—Mr. J. O. Arnold and Mr. A. A. Read on "The Chemical and Mechanical Relations of Iron, Tungsten and Carbon, and of Iron, Nickel and Carbon." 8 p.m.

Royal Sanitary Institute.—Mr. W. C. Tyndale on "House Drainage." 7 p.m.

MONDAY, MARCH 23.

Royal Institute of British Architects.—Paper by Mr. L. March Phillipps entitled: "On Borrowing in Architecture." 8 p.m.

Royal Society of Arts.—Professor W. A. Bone on "Surface Combustion." 8 p.m.

Royal Sanitary Institute.—Mr. A. J. Martin on "Sewerage." 7 p.m.

University of London (Victoria and Albert Museum).—Mr. Banister Fletcher on "Renaissance Architecture." 5 p.m.

Liverpool Architectural Society.—Mr. J. A. Davenport on "Concrete and Reinforced Concrete 'Don'ts' for Architects." 6 p.m.

TUESDAY, MARCH 24.

Institution of Civil Engineers.—Mr. T. Clarkson on "Some Recent Developments in Commercial Motor-Vehicles," and Mr. T. G. Gribble on "Comparative Economics of Tramways and Railless Electric Traction." 8 p.m.

University of London (British Museum).—Mr. Kaines Smith on "Greek Art and National Life." 4.30 p.m.

WEDNESDAY, MARCH 25.

Manchester Society of Architects.—Paper by Mr. J. Harvard Thomas.

Royal Society of Arts.—Sir Charles Waldstein on "Fashion in Art." 4.30 p.m.

Royal Sanitary Institute.—Mr. A. J. Martin on "Sewage Disposal." 7 p.m.

Edinburgh Architectural Association.—Mr. F. J. Grant on "Heraldry."

THURSDAY, MARCH 26.

Carpenters' Hall, London-wall.—Mr. E. B. Havell on "Indian Buildings." 8 p.m.

The Concrete Institute.—7.30 p.m.

Society of Antiquaries.—8.30 p.m.

University of London (British Museum).—Mr. Banister Fletcher on "Byzantine Architecture." 4.30 p.m.

University of London (Victoria and Albert Museum).—Mr. Kaines Smith on "The Nature of Beauty." 3.30 p.m.

FRIDAY, MARCH 27.

Architectural Craftsmen's Society, Glasgow.—Business meeting.

Royal Sanitary Institute.—Mr. A. J. Martin on "Water Supply, Sources of Supply and Distribution." 7 p.m.

CORRESPONDENCE.

A Competition for Women.

SIR,—Unlike your two former correspondents, "Justicia" and "One Who Means to Compete," I took your original announcement of the competition for women seriously and in good faith. I realised that it was a competition for a special branch of the profession, and felt confident that in your hands it would be managed throughout on strictly professional lines, both with regard to the assessors and the competitors. And for myself I ask for nothing more.

I understand that the competition is intended for women architects, and should like to point out to "Justicia" that architects do not usually present their ideas in a "crude" fashion. Also it is a little difficult to see how or why the suffrage question comes into the matter at all.

I cannot help thinking that "One Who Intends to Compete" has been unfortunate in her selection of houses. The evils which she rightly condemns do not occur in any house designed by a good architect. It is hardly fair or reasonable to hold architects responsible for the defects of the average house, for with the vast majority of houses architects have had nothing whatever to do.

Some of the worst houses I know are the expression of their owners' own "crude" and amateurish ideas of house design, showing little technical knowledge or artistic ability and great lack of appreciation of the difficulties involved.

5, *Verulam-buildings,* ANNIE HALL.
Gray's Inn, London, W.C.

"Restoration of Ancient Buildings."

SIR,—It is with some hesitation that I give my opinion on the elusive suggestion contained in the Editor's Note, "That the idea expressed by the stones of a building is of more value to the architect than the stones themselves." Its exact shade of meaning escapes me just when I seem to get near to it; indeed, I am at times inclined to look down to see whether the Editor is trying to pull either of my legs.

However, on the supposition that the sentence implies, as it seems to do, that it is through the medium of the "stones" that the "idea" is presented, and so that by the actual materials and craftsmanship alone can it be perceived, the argument seems to lead straight back to the principle held by the Society for the Protection of Ancient Buildings, which is, "That any interference with the stones of an old building reduces the value of that building in the expression of the thought and 'idea' of its originator and also as regards the atmosphere of the age in which it came into being, and that by this reduction the quality, which is of true value to the architect, is lost."

It is, I think, clear to all that the stones as stones have no architectural value, but depend alone for this on the human thought and labour expended on them.

I apologise if I have missed the intention of the sentence, which I confess at first sight might be taken to mean that the idea expressed by the form and design of a building is of more value to the architect than the stones themselves, but as this is not the question it is not answered here.

A. R. POWYS
(Secretary, Society for the Protection of Ancient Buildings).

Superintending Architect, Nigeria.

SIR,—In an advertisement which has appeared in the professional journals regarding this appointment candidature was restricted to members of one architectural institution. In the interests of members of other architectural bodies and of unattached architects, I suggested to the Crown Agents for the Colonies that by so narrowing the selection they were inadvertently doing some injustice to other members of the profession. I have received a most courteous reply from the Crown Agents to the effect that the fact to which I drew their attention did not occur to them when issuing the advertisement referred to, and that in and reissue the advertisement will be amended to meet the case. They further intimate that they will in the meantime be pleased to consider applications from any suitable candidates.

I think this information will be of interest to quite a number of architects.

C. MCARTHUR BUTLER
(Secretary, Society of Architects).

Heating of Small Country Schools.

SIR,—With reference to my previous letter, which you were kind enough to insert in your issue of the 13th ult., I am somewhat disappointed at the nature of the replies I have received. While the letter appears to have attracted general notice and reached firms up and down the country, it is surprising to find that they quite missed the point of the letter. Almost without exception, the firms refer to small boilers at the back of the ordinary grate. This, of course, is quite hopeless if one is going to keep a heating surface of as much as 800 sq. ft. going. What I wanted was a really genuine boiler which professed to be a boiler, and nothing less, but which nevertheless could at will show an open fire by throwing open the folding doors in front. I want a boiler presentable in appearance, and giving the greatest amount of efficiency for the least consumption of fuel. This boiler must be independent, and will stand in the chimney-breast recess in classrooms.

I am hoping that this may yet catch the eye of one or two firms who, if they do not already make such a thing, will be ready and prepared to go into the matter. It is to be hoped that British firms will not, with their usual conservatism in these matters, allow foreign competitors to come into the field and take the trade from them. GEORGE H. WIDDOWS.
Derby.

St. Julien-le-Pauvre, Paris.

SIR,—Those who know that little gem, St. Julien-le-Pauvre, Paris, will rejoice in the news you give about it. I spent a whole morning years ago in first finding, and afterwards (*vid* red tape) getting a permit to see it, and can honestly say that it was well worth all the trouble I took. It is a cathedral in miniature, and shows how a small building can become dignified by a subtle mastery of scale in all its parts. So few of us seem either to have seen or heard of it. At least, it will now no longer be quite buried.

E. SWINFEN HARRIS, F.

[*** Several letters are held over until next week for want of space.—ED.]

INTERCOMMUNICATION COLUMN.

Appraiser's Licence.

SIR,—Under what circumstances is a surveyor required by law to have an appraiser's licence? Is such a licence required in any of the following?—(1) Preparing estimates for tenders; (2) valuations for certificates for advances upon building operations; (3) valuations of dilapidations, either as claim or for settlement of claim; (4) valuations for advances by way of mortgage; (5) valuations for probate or estate duty; (6) valuations for dealing with "provisional valuation" under the Finance (1909-10) Act, 1910; (7) valuations for purpose of award, *as arbitrator;* (8) in negotiating and arranging for sale or letting of property, whether land or buildings. K. B.

[*** The queries raised by our correspondent will be dealt with in our next ensuing Legal Section.—ED.]

COMPETITION NEWS.

It must be understood that the following paragraphs are printed as news, and not as advertisements; and that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.

The list of current Competitions is printed on page 370.

Specialities for Cheap Dwellings, France.

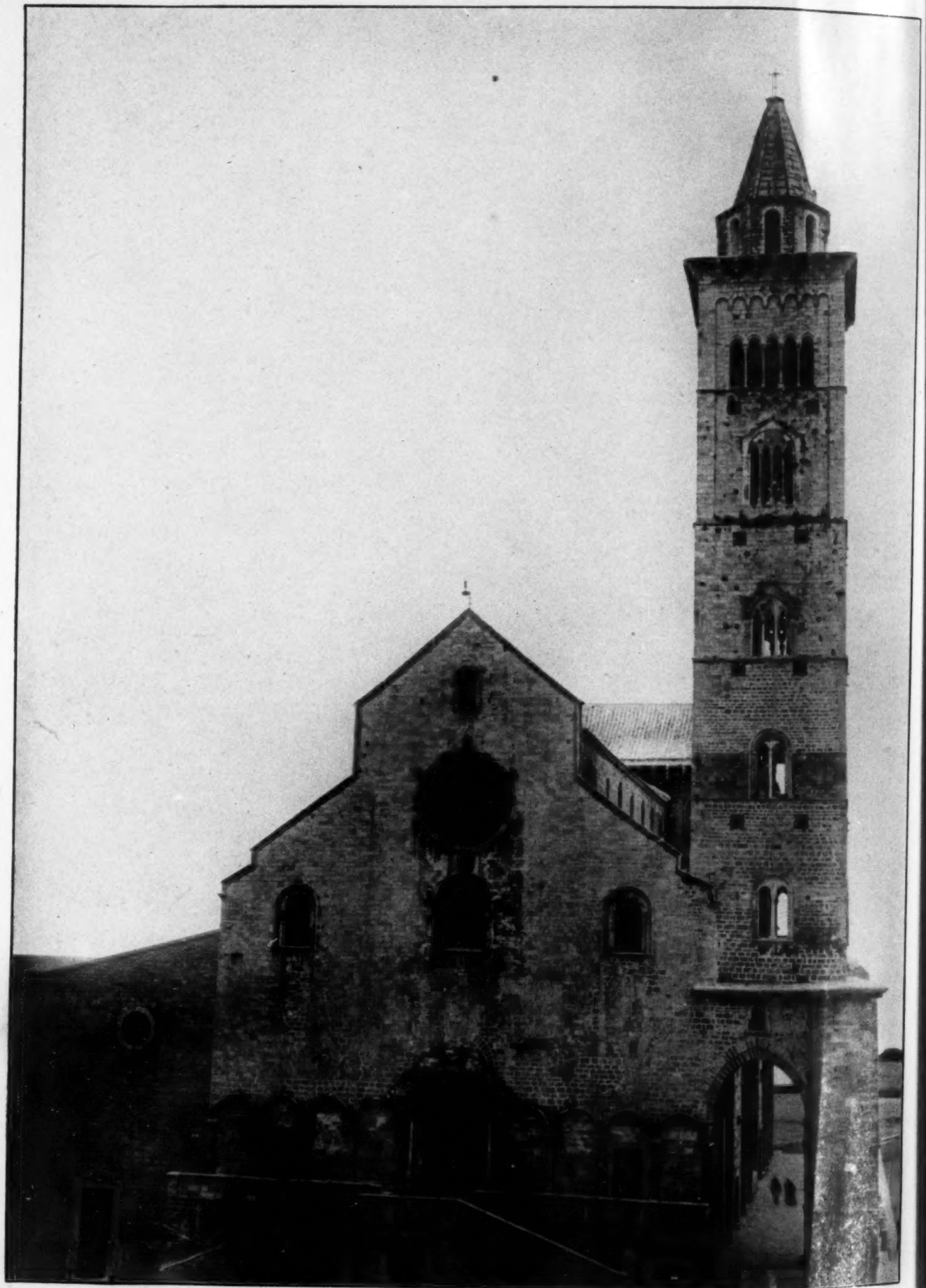
The Board of Trade have received, through the Foreign Office, from the French Ambassador in London, particulars of an International Competition and Exhibition of Specialities for Cheap Dwellings to be held in Paris during the present year. The exhibition will comprise materials for construction, heating, ventilation, and lighting appliances, hygiene and sanitation, cooking, furnishing, clothing, etc. The competition and exhibition are being organised by the "Comité de Patronage des Habitations à Bon Marché et de la Prévoyance Sociale du Département de la Seine," with the official patronage of the Minister of Labour, the City of Paris, and the Department of the Seine. It is understood from a communication received from the French Permanent Exhibition Committee that the exhibition will be held in the centre of Paris, probably either at the Palais Royal or at the Tuileries, and will open about June and last for one month. Further particulars may be obtained from the "Comité de Patronage des Habitations à Bon Marché et de la Prévoyance Sociale du Département de la Seine," at the Hôtel de Ville, Paris. A copy of the programme and regulations may be seen by United Kingdom firms interested on application at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.

Artisan Dwellings, Farnborough.

Mr. Frederick G. Sainsbury, architect, of Reading, has been awarded in open competition the premium offered by the Farnborough Urban District Council for plans adjudicated by them to be the best submitted for three types of artisan dwellings.

THE OLD HALLS AND MANOR HOUSES OF YORKSHIRE.

In Mr. Louis Ambler's letter in our last issue there is a printer's error in the first line of the second paragraph, the word "oates" having been substituted for "dales."

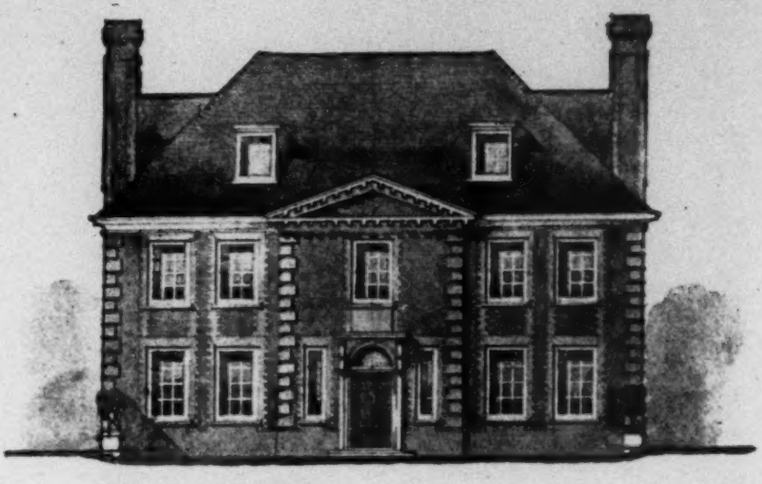


[Photo.: Angelo De Mattia, Bari.

CATHEDRAL OF TRANI.

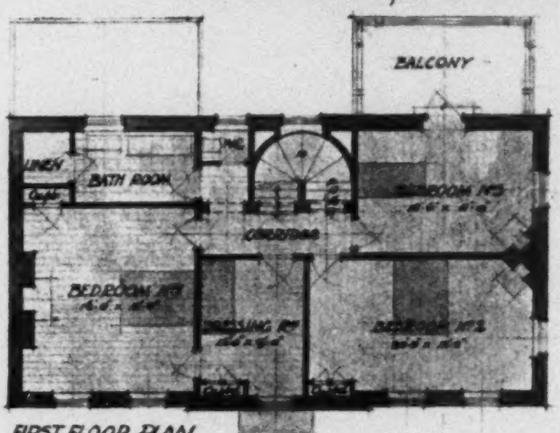
[*Photo.: Angelo De Mattia, Bari.*

CATHEDRAL OF TRANI.



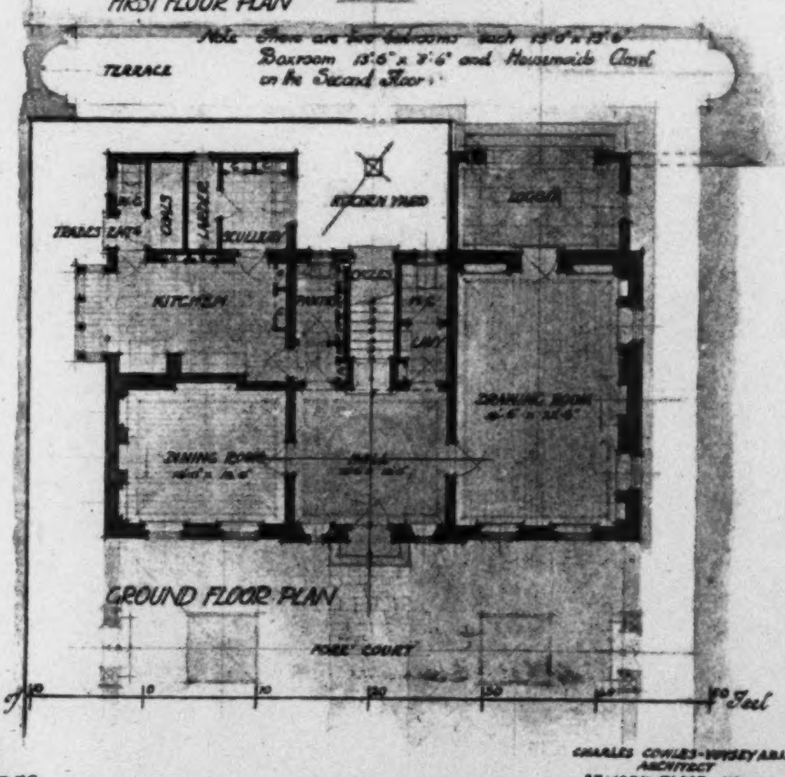
FRONT ELEVATION

Note: Materials: Purple sand faced bricks for general walling and light red for dressings with roof of hand made brindle tiles. Woodwork painted white.



FIRST FLOOR PLAN

Note. There are two bedrooms each 13'0" x 13'6" Boxroom 13'6" x 7'6" and Housemaids Closet on the Second Floor.



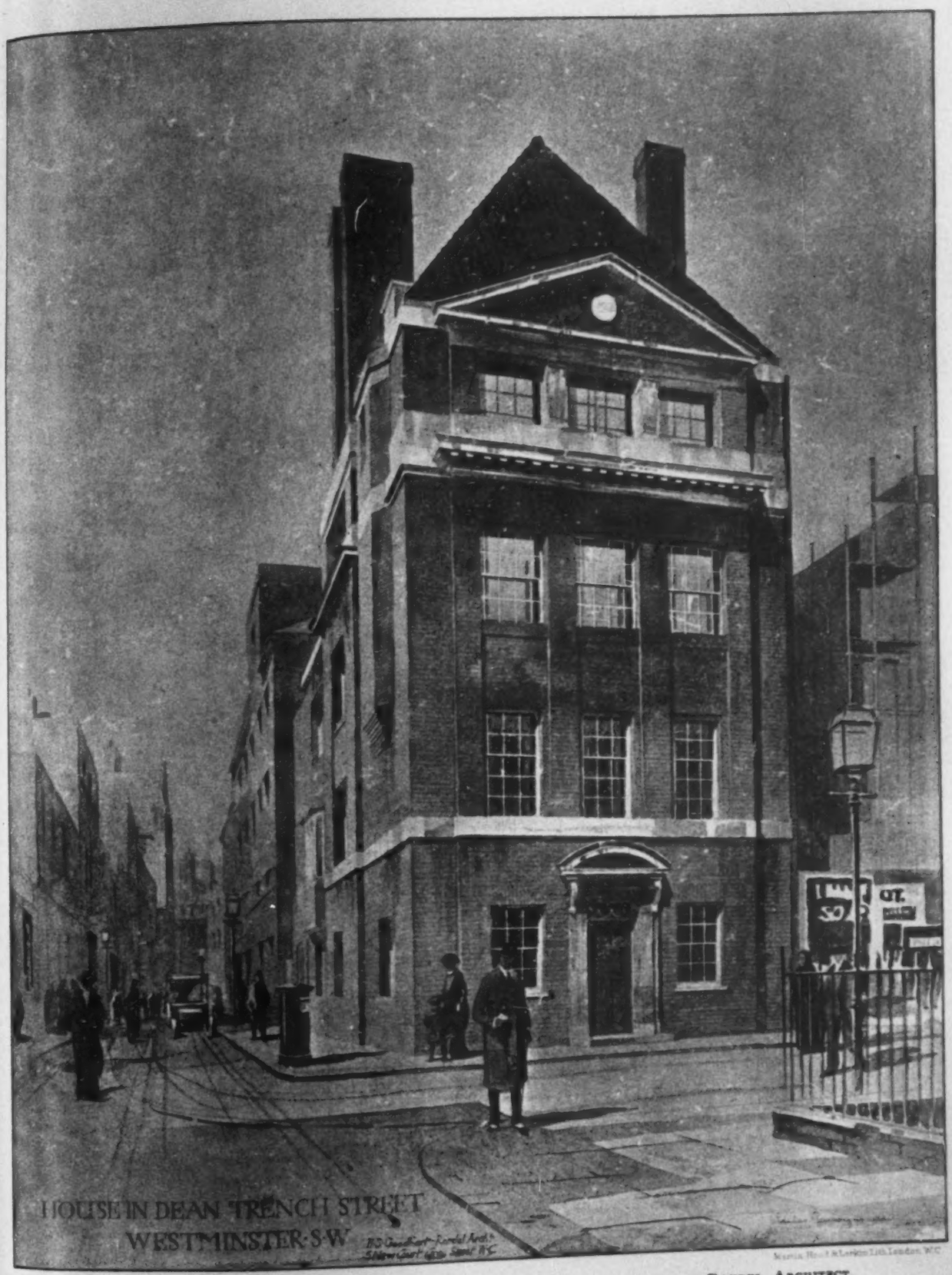
GROUND FLOOR PLAN

CHARLES COWLES-VOYSEY A.R.I.B.A. ARCHITECT 23 YORK PLACE, W.

C.C.V. DEC '13

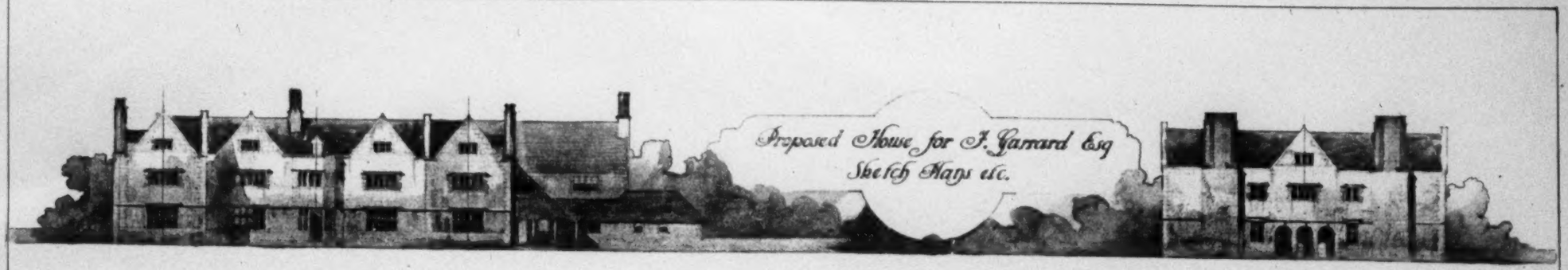
Martin, Hood & Lawton Ltd. London, W.C.

"THREEWAYS," WELLGARTH ROAD, HAMPSTEAD, N.W.—Mr. CHARLES COWLES-VOYSEY, A.R.I.B.A., ARCHITECT.



HOUSE, DEAN TRENCH STREET, WESTMINSTER, S.W.—Mr. H. S. GOODHART-RENDEL, ARCHITECT.

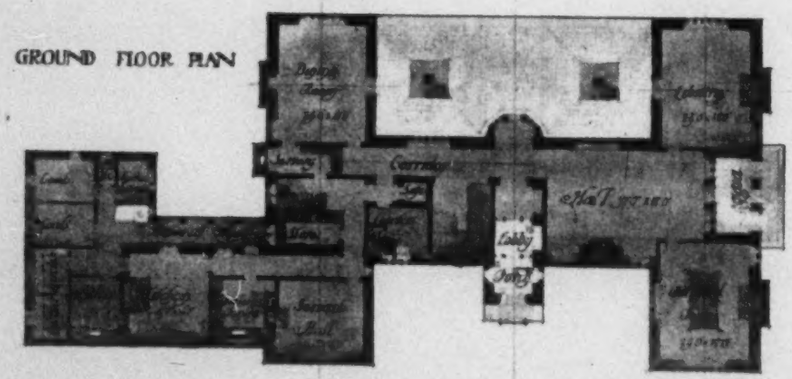
Royal Academy Exhibition, 1913.



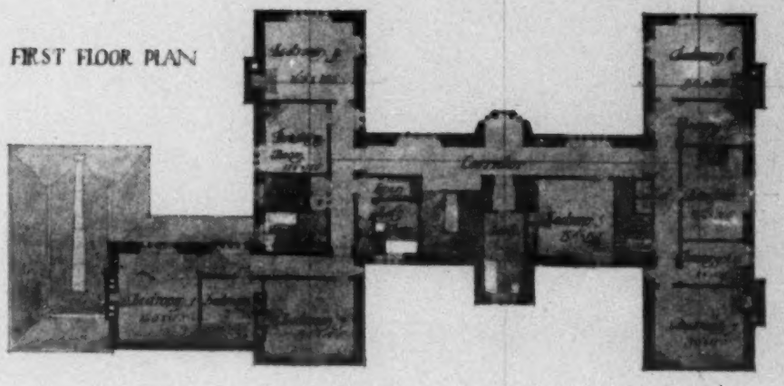
SOUTH ELEVATION

WEST ELEVATION

GROUND FLOOR PLAN

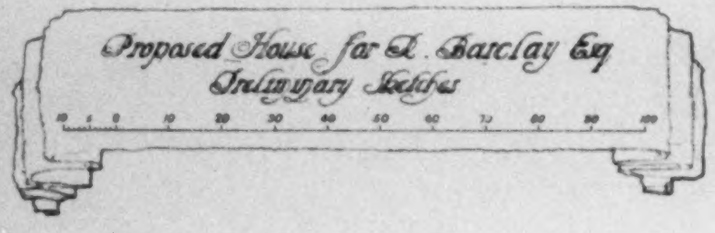


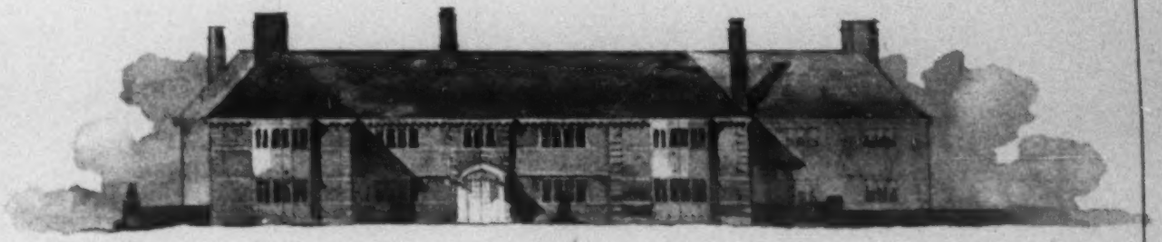
FIRST FLOOR PLAN



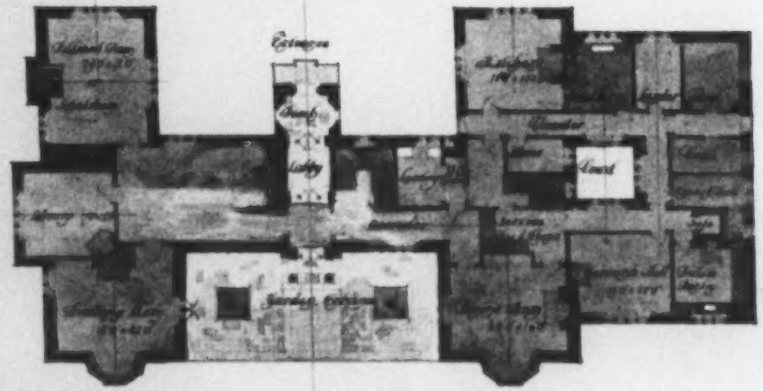
PROPOSED HOUSE AT GORING.—Mr. Ernest Newton, A.R.A., Architect.

Royal Academy Exhibition, 1913.

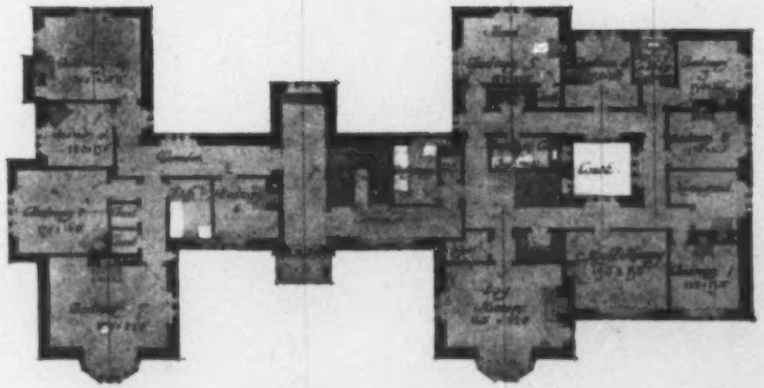




GARDEN ELEVATION



GROUND FLOOR PLAN

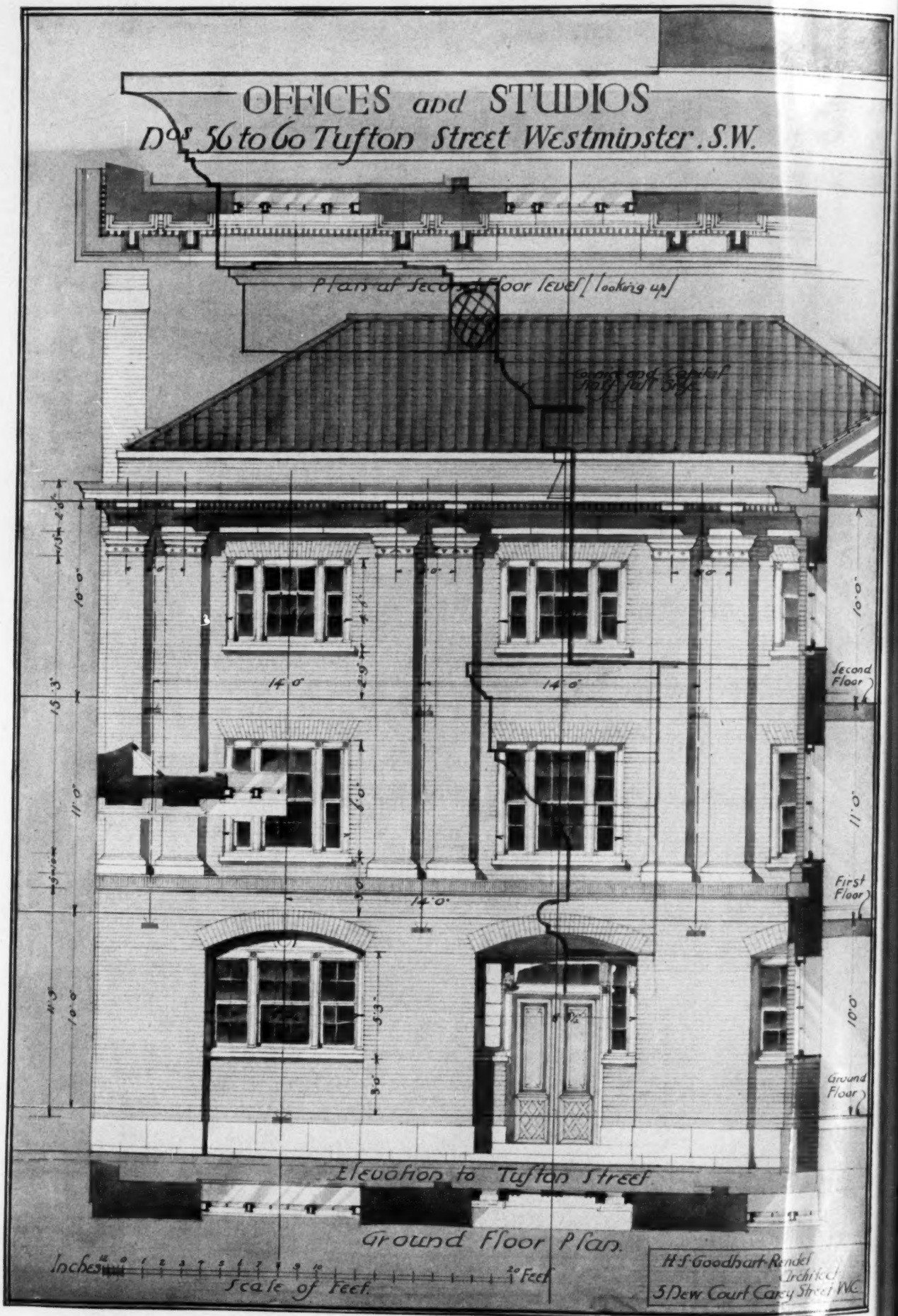


FIRST FLOOR PLAN.

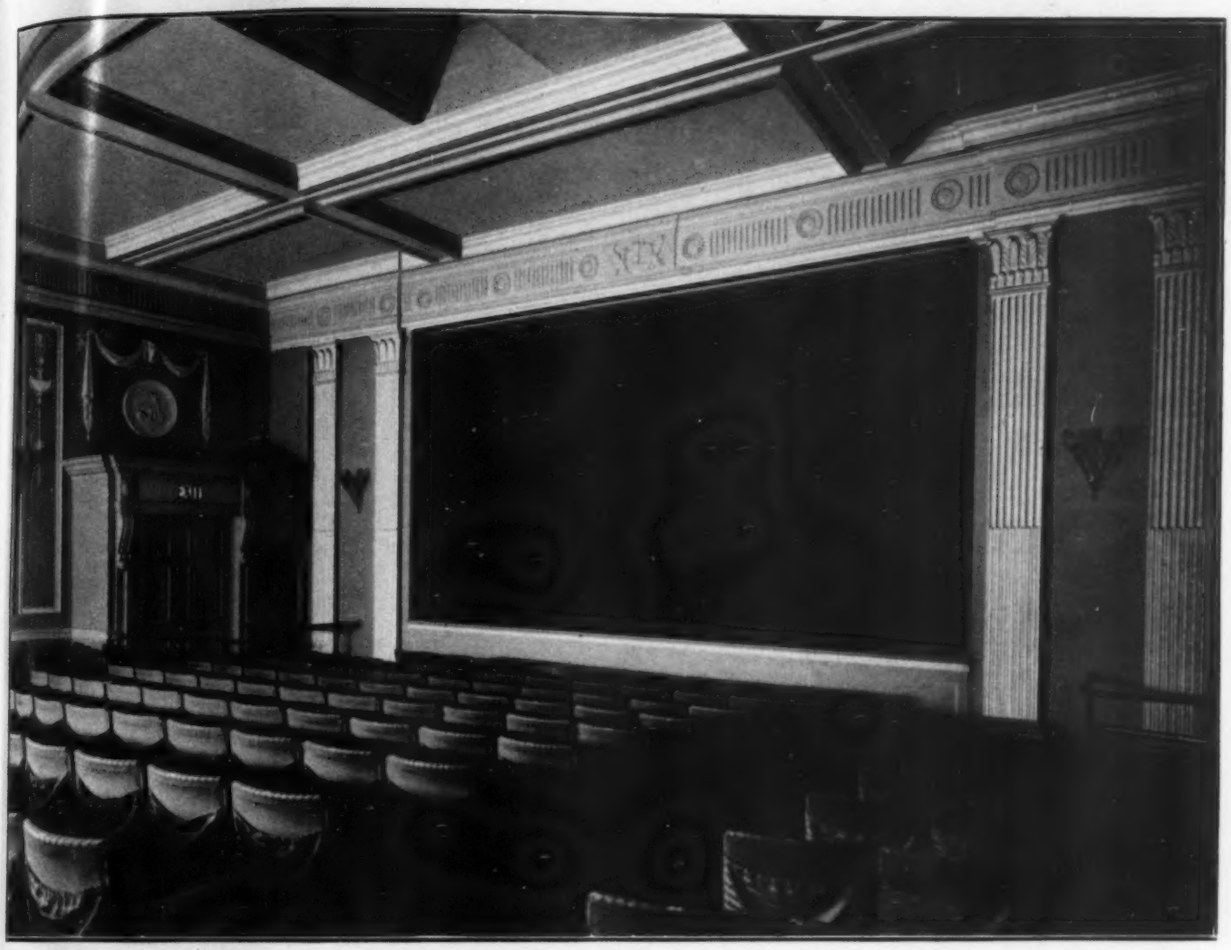
Ernest Newton R.A.
Architect
7 Lawrence Gardens

North Road Marylebone London W.C.

PROPOSED HOUSE AT DORKING.—Mr. ERNEST NEWTON, A.R.A., ARCHITECT.



Nos. 56-60, TUFTON-STREET, WESTMINSTER, S.W.—Mr. H. S. Goodhart-Rendel, Architect.



VIEW TOWARDS PROSCENIUM.

VIEW INTO AUDITORIUM.

THE LITTLE THEATRE, ADELPHI.—MESSRS. HAYWARD & MAYNARD, A.R.I.B.A., ARCHITECTS.

CONSTRUCTION SECTION.

GENERAL POST OFFICE, GLASGOW.

THE fine open space known as George-square, opposite Queen-street Railway Station, may justly be described as the municipal centre of the City of Glasgow.

It was originally a residential square of mansions enclosing a private garden, but, as has happened in the case of numerous squares of the same kind in London and other cities, its character gradually changed with the growth of commerce and industry, until the central space was no longer required by the new class occupying the old houses.

Consequently, the Corporation entered into negotiations with the reputed owners for the purchase of the site, with the somewhat amusing result that investigation proved the land to be already the property of the municipality. Thereafter the square was laid out as a public garden and formally opened in the year 1876 by the late King Edward VII., then the Prince of Wales.

The palatial Municipal Building occupies the eastern side of the square, at the southern corner of which is the General Post Office, and elsewhere are the Bank of Scotland, the Merchants' House, Queen-street Station, and other important buildings.

The Post Office building is bounded on the east by South Frederick-street, on the west by Hanover-street, and on the south by Ingram-street, the main front facing George-square. The original part of the building dates back to 1878, and is in the Italian Renaissance style of architecture. It is about 75 ft. high above street level and includes four stories.

Successive developments of the postal service have rendered necessary from time to time various extensions, one of these having involved the acquisition and occupation of the old Athenæum, while others are represented by the new Parcel Post Office in Wellington-street and Waterloo-street, and by two buildings at present nearing completion at both rear corners of the site.

The latest extension comprises two separate blocks, each with a 55-ft. frontage to Ingram-street and return elevations of 120 ft. to South Frederick-street and Hanover-street respectively.

Fig. 1 is a view showing the two new blocks in course of construction, the building between them being the part of the previously existing structure which faces Ingram-street.

The height of the new buildings from foundation level to the flat roof is 96 ft., but a light mansard roof is now being constructed which will permit the original roof to be converted into an additional floor.

Until the commencement of the present extension, the Post Office buildings were T-shaped in plan, but with the filling in of the two corners they have now taken a rectangular form, and occupy the entire area between the four public thoroughfares already mentioned.

The South Frederick-street block provides accommodation for the following departments of the service :—

Basement Floor.—Bag store and bag cleaning-room.
Ground Floor.—Loading dock and extension of sorting office.
First Floor.—Postmen's and sorters' retiring-rooms and lavatories.
Second Floor.—Male and female telegraphists' retiring-rooms and lavatories.
Third Floor.—Engineers' staff and store-rooms.
Fourth Floor.—Ditto.
Fifth Floor.—Dining-rooms, kitchens, etc.

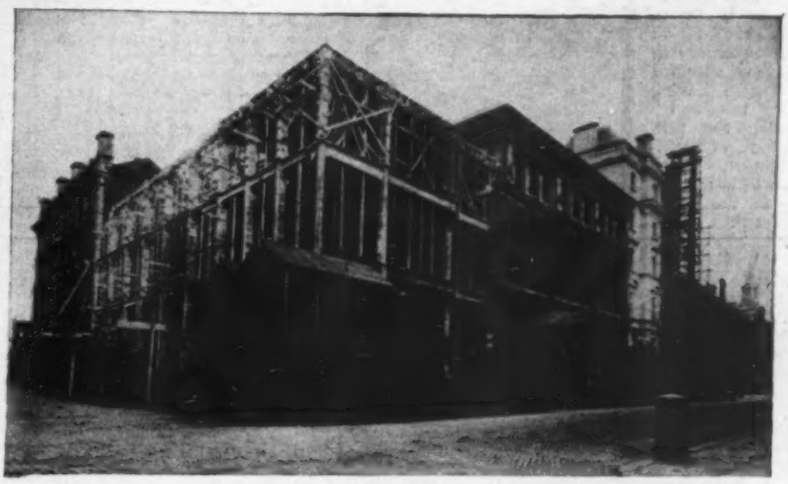


Fig. 1. General Post Office, Glasgow.
Corner of West Block under construction at the left hand. East Block completed with masonry walls at the right hand.

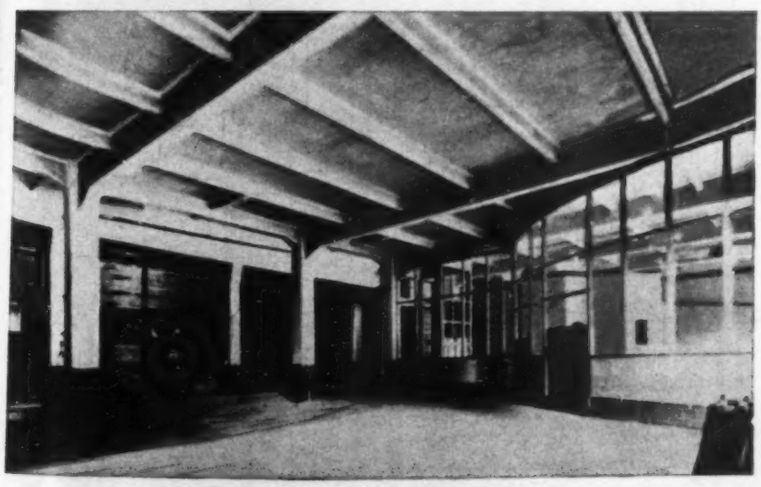


Fig. 2. General Post Office, Glasgow.
Part of Ground Floor : East Block.

The Hanover-street block includes accommodation as follows :—

Basement Floor.—Boy messengers' dining-rooms, kitchen, etc.
Ground Floor.—Loading dock, extension of sorting offices, etc.
First Floor.—Survey branch, clerks' rooms, etc.
Second Floor.—Telephone administrative staff offices.
Third Floor.—Ditto.
Fourth Floor.—Ditto.
Fifth Floor.—Sectional engineer's rooms.

Structurally considered, each of the buildings consists of a ferro-concrete skeleton, formed of columns, wall lintels, floor beams, and floor slabs. These members, all in monolithic connection, constitute an indeformable frame of great strength, which in fact is sufficient to support not only the whole of the floor and roof loads, but also the weight of the masonry outer walls, the latter having been added simply for architectural effect and to afford protection and shelter from the weather. Although giving an aspect of massive strength, the masonry walls are in reality carried at each floor upon the ferro-concrete framework, as in the case of the King Edward Building of the General Post Office, London.

The flooring includes a system of slabs, secondary beams, and main beams, as illustrated by the typical examples given in Figs. 2 and 3.

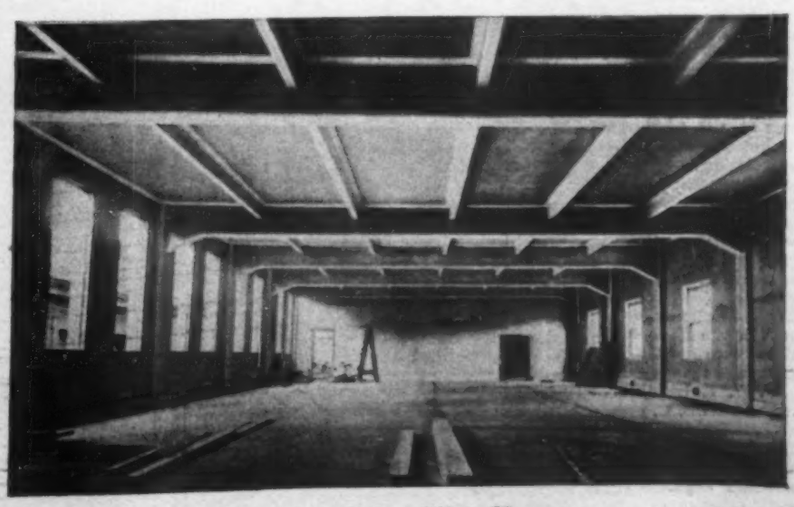


Fig. 3. General Post Office, Glasgow.
Part of Third Floor : East Block.

The slabs have a span of 7 ft. and vary from 3½ in. to 4 in. thick, according to the calculated superload. The secondary beams, generally with a span of about 14 ft. 6 in., between supports, are of uniform section in all floors, variations of strength according to the specified loading having been made by varying the proportion of reinforcement. The main beams generally in the South Frederick - street block have a span of 41 ft. from centre to centre of the columns, with an overall depth of from 30 in. to 34 in., according to load conditions. Corresponding beams in the Hanover-street block have an overall depth of 30 in., with a span of 35 ft. from centre to centre of the columns.

The flat roof was originally designed so as to be capable of acting at some future time as a floor covered by a mansard roof should occasion demand. As previously mentioned in this article, the occasion has already arisen for this upward extension, and to provide for the rapid increase in the work of the Post Office the roof has now become the fifth floor of each building.

Pavement lights were necessary for the basements at all the street frontages. The lights were required to be practically continuous, and to comply with this condition a ferro-concrete retaining wall from 10 ft. to 12 ft. high was constructed, being divided into vertical bays by small secondary beams; main horizontal beams at the top and bottom take the reactions of the secondary beams, and transmit the thrust to the main columns of the building by means of horizontal struts.

The two new blocks of the Post Office were designed in the office of Mr. W. T. Oldrieve, F.R.I.B.A., Principal Architect to H.M. Office of Works, Edinburgh, for which department details of the ferro-concrete construction, in accordance with

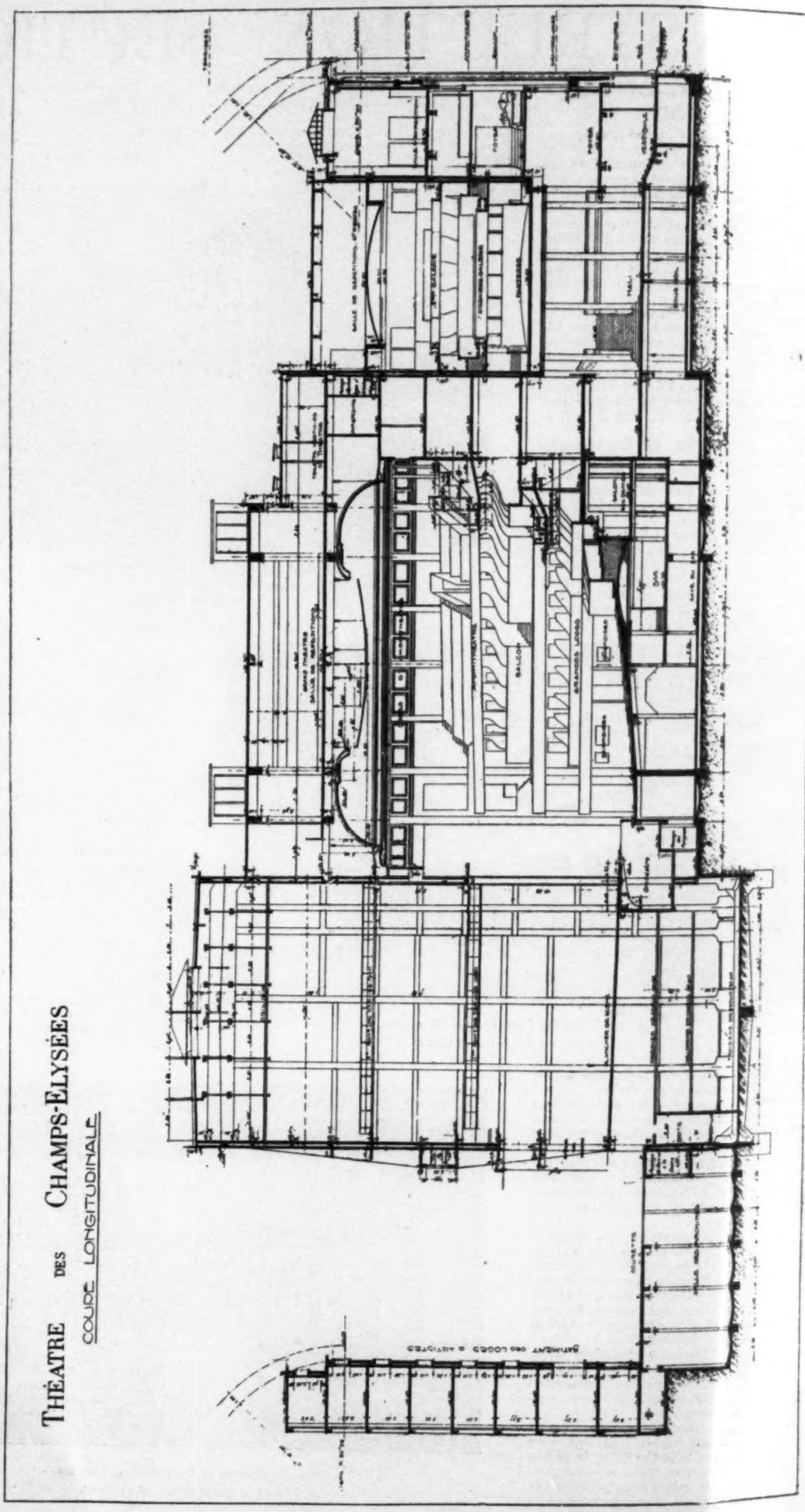


Fig. 1. Longitudinal Section.

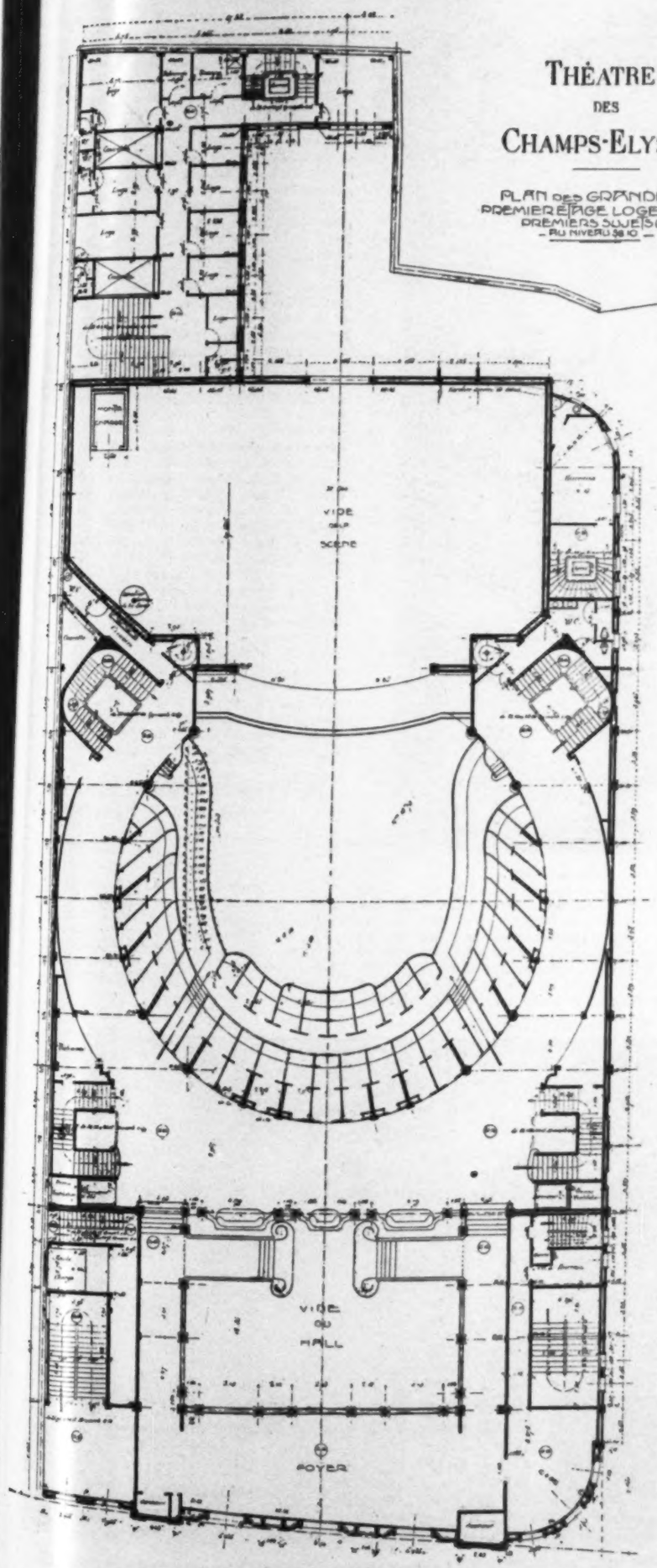


Fig. 2. General Plan.

Fig. 1. Longitudinal Section.

the Mouchel-Hennebique system, were prepared by Messrs. L. G. Mouchel & Partners, of Westminster, Mr. W. Dunn, F.R.I.B.A., acting as expert adviser to H.M. Office of Works for the ferro-concrete construction. The contractors are Messrs. Perry & Co. (Bow), Ltd., of London.

THE NEW THÉÂTRE DES CHAMPS-ELYSÉES.

THIS new French theatre is an important one, and contains many points of interest in its planning, construction, and equipment, while its architecture is somewhat of a departure from the usual French style and displays a great freedom on the part of the designer. The building was erected from the designs of M. Roger Bouvard, 16, Place Vendôme, a well-known French architect, and it is constructed of reinforced concrete throughout.

It has a frontage of about 130 ft. to the Avenue de Montaigne and a depth of about 340 ft. The entrance opens into a large vestibule, having a short flight of steps across the full width, leading up to a large hall, about 80 ft. wide and 45 ft. deep, the ceiling of which is immediately under the auditorium of the small comedy theatre, which is situated on the first floor of the building. On passing through the hall access is gained to the auditorium of the large theatre, which is contained in a square having a length of side equal to 120 ft. The inside of the auditorium itself has a diameter of 92 ft., and there are three tiers, or balconies, each of which is cantilevered and carried without any interior columns to obstruct the view of the audience. The stage is 62 ft. deep, 85 ft. wide, and 130 ft. high, and flanked on both sides by various offices and stores. The dressing-rooms are situated at the rear of the building and approached by a wide passage at the side, which leads into a large court behind the stage, and under which are situated the dynamos and electrical machinery. A general section of the building is illustrated in Fig. 1, and the various levels can be gathered from the drawing. It may be said that the design was greatly influenced by the constructional features, which were not disguised to the same extent as is often the case, and it is a typical example of a true reinforced-concrete building. The loads of the auditorium are practically carried by large reinforced-concrete frames, which are formed with groups of four columns which rest on the main foundation described below. These frames are connected at the top by large reinforced-concrete beams, which support large reinforced-concrete arches, 95 ft. long; and above this the two top floors are carried. This main framing has fixed the general lines of the theatre and governed the design generally, even the marble lining of the elevations following the exact line of the constructional members, while the enriched portions are introduced as panel filling.

The columns in the vestibule are all constructional members of reinforced concrete, arranged to form a colonnade. Owing to the great depth required under the stage, and to avoid raising the ground floor much above the pavement level, the lowest floor is much lower than the neighbouring River Seine, and precautions had to be taken to prevent flooding when the river overflows. The lower floors were therefore constructed in the form of a large dish, which forms the seating for all the vertical divisions, which are watertight and act as stiffeners to the dish, being carried up to the ground-floor level. There is a considerable pressure on this watertight foundation dish, especially under the stage and electrical chambers, and concrete piles are driven at certain points, while in other cases the load is distributed directly on to the soil. The floors of the theatre, foyers, and corridors are constructed throughout with reinforced concrete, with spans varying up to 20 ft.; and in many cases the beams project below the slabs to form panels, which remain as part of the decorative scheme.

All the walls are constructed of reinforced concrete also, that to the front being built up with horizontal main beams and vertical columns with slab filling between, the latter in many cases being executed in brick, to which the white marble lining is attached. The wall at the back of the stage is 70 ft. wide and 130 ft. high, and this is quite independent of any

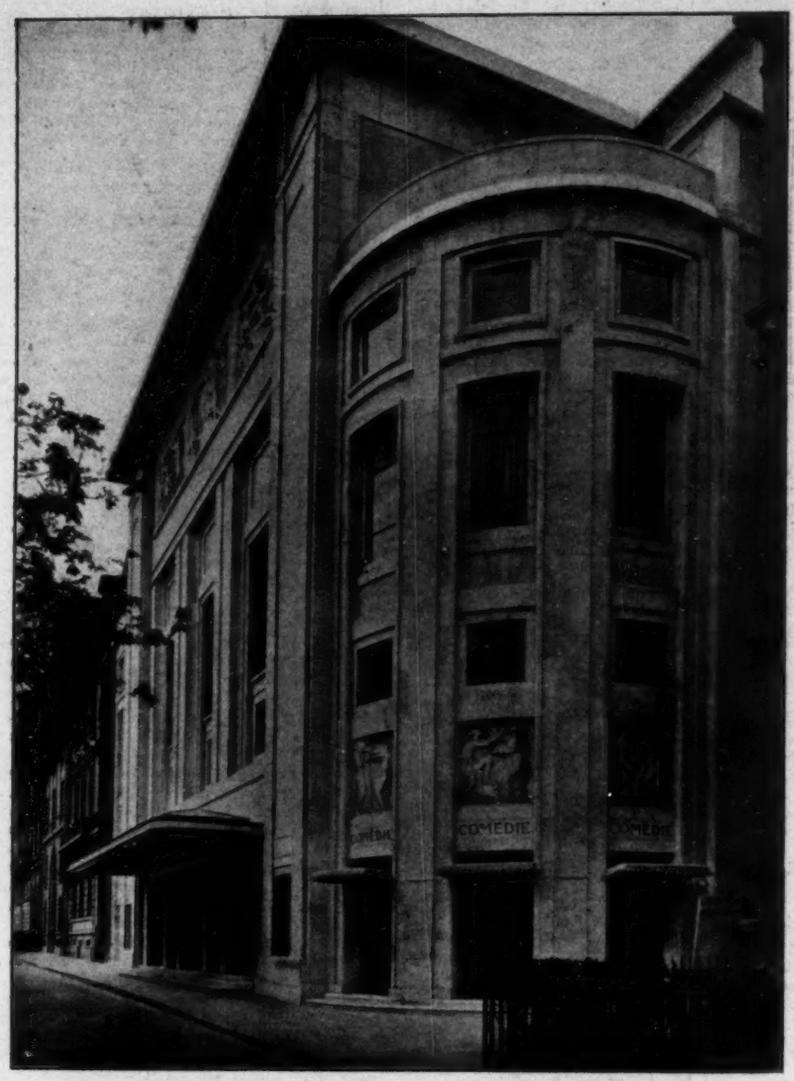


Fig. 3. Théâtre des Champs-Elysées: Exterior View.

intermediate beams or supports. It is formed with a thickness of 18 in. and built up with vertical and horizontal reinforced-concrete members, having a filling of brickwork, which is built in two 4½-in. leaves, with a 9-in. cavity between. This wall supports the roof of the stage at the top, which is formed with three main beams, each 3 ft. 3 in. deep and having a span of 60 ft., supporting the flat slabs, while some large roof lights are provided, and these are constructed with inflammable material, which will ensure their prompt combustion in the case of a fire on the stage and allow the flames and smoke to issue at this point, thus lessening the danger of the fire spreading to the auditorium. Some interesting construction is carried out in the balconies, which have a projection of 17 ft. to 20 ft. carried on reinforced-concrete cantilevers, which are tailed back to the wall of the comedy theatre situated over the vestibule, while the flat saucer dome of this theatre is also of reinforced concrete. The floor situated over the ceiling of the large auditorium is used for the purposes of rehearsal, and the flat roof over the latter forms an excellent terrace, capable of accommodating a large number of persons. This floor and roof are carried by large main beams, which span between the grouped columns, forming the four pillars previously mentioned, and thus the spans are considerable.

The stage and its equipment are worthy of note as being designed in accordance with all modern requirements for quick and easy change of scenery. The opening to the auditorium is 40 ft. by 35 ft., and the under stage is 27 ft. deep, divided up into three floors. The clear space above the opening is 83 ft. high, and this allows the scenery to rise up without any rolling or folding. The floor has an inclination towards the opening of about 3 in. in every 100 in., and it includes sliding and movable portions, acting separately or together, which allow the whole of the back of the stage to disappear or rise up automatically, while the space can be completely covered with sliding traps. Large panoramic scenery is provided at the back of the stage, this being on large vertical and horizontal cylinders, which cause the scenery to change by moving it either across the opening or in a vertical direction, and the space allotted to the orchestra can be completely covered, if necessary. The accommodation is sufficient for 110 musicians, and an organ has been erected above the orchestra, which is controlled from the stage and operated by electricity. Trials that have been carried out to test the acoustic properties of the theatre have given excellent results, due to the absence of columns and the circular shape of the auditorium.

The lighting of the stage is arranged with a system of four colours—white, red, green, and yellow—and this is controlled by a main switchboard from which every possible variation can be obtained from the full light to a semi-darkness, and the reflectors are of enamelled iron, while the lampholders are of china. The large auditorium is mainly lighted by a large circular ceiling shell, having a diameter of 50 ft. and forming part of the ceiling decoration. This shell is formed with a framework of small bronze bars, with a filling of crystal, and some of the lamps are placed on the edge of the shell to throw a strong light on the painted frieze around and indirectly light the audience. The heating and ventilation have been carefully considered, and no less than five large boilers are installed for the supply of steam. The whole of the air is filtered and heated, and the vitiated air is drawn both from the lower and upper parts of the auditorium directly by extracts at the two levels. A very complete apparatus has been installed to prevent the spread of fire, a portion of this being in the form of an automatic system, and all the cleaning is accomplished with a powerful vacuum plant. The whole building is equipped in a thorough manner with every modern appliance for the convenience, safety, and comfort of the patrons and staff, and the building has been aptly described as "the theatre of the future." The extensive use of reinforced concrete in a building of this kind is good evidence of the almost universal use to which this material is now being placed, and its applicability to all the varying forms here required; while providing the maximum of fire resistance it certainly justifies the adoption by those responsible for the design and construction of the building. ALBERT LAKEMAN.

BETTER ESTIMATING AND CONTRACT METHODS.

THIS subject is one which is of vital importance to all those connected with the building industry, and the American Institute of Quantity Surveyors has done much during recent years to promote a better method of inviting tenders and letting contracts. A *Monthly Bulletin* is published by the Institute, and we give some extracts here which are interesting and explain various points in connection with the subject which are worthy of notice.

Fig. 4. Théâtre des Champs-Elysées: Interior View showing Reinforced Concrete Columns.

"We often hear contractors complain that architects' plans and specifications are contradictory, ambiguous, incomplete, and a number of other things. The architect is blamed, even by those of his own profession. To this cause is attributed many of the evils from which the building community suffer. Few persons, however, admitting that some of this is true, ever stop to consider the reason just why such conditions exist. We are inclined to think it very seldom arises from downright professional incompetence. Some of it arises probably through negligence, some through accepting work at a fee which makes it unprofitable for the architect to go to the trouble of making proper contract documents. The owners, of course, suffer for this, but it would be a farce to extend to them the least sympathy. They may have sought to get their work done at a low fee, too low for their own good or for the good of anyone concerned. Most of these alleged defects arise through the undue speed which so many owners seem to insist upon.

Now, an estimate of the cost of a building cannot be accurate without accurate quantities. That much must be admitted. Accurate quantities, on the other hand, cannot be prepared from inaccurate or doubtful plans and specifications. It stands to reason, therefore, that among the many advantages which the quantity system has over our present practices the greatest perhaps are the great saving of time, greater accuracy in figuring, and last, but by no means least, the undeniable fact that the drawings and specifications must be complete and entirely free from the before-mentioned alleged objections. No competent professional quantity surveyor would risk his reputation and his living by winking at or overlooking incompleteness and uncertainty such as contractors often have to contend with now when figuring. With plans, specifications, and details as perfect as the human brain can make them many if not all the pernicious conditions existing now will disappear. This is a fact which might well be considered by those who are as yet undecided as to the merits of the quantity system and under which absolutely complete plans and specifications are essential. It will be obvious that the raising of the standard of the finished drawings and specifications will discourage the cutting of fees by a certain class of architects."

The *Monthly Bulletin* quotes from the *Building Review* (which is the official organ of the Contractors' and Dealers' Exchange of New Orleans, La.) part of an editorial upon the subject of quantity surveying, the chief points of which are as follows:—

"On January 29, 1914, the Louisiana Chapter of the American Institute of Architects attended a joint meeting of the members of that organisation and the Contractors' and Dealers' Exchange, which was to be addressed by Mr. G. Alexander Wright, of San Francisco, on the subject of "Quantity Surveying" as a surer method of estimating on building work. His discourse was not one of mere theory. It was the experience and views of one who is not merely a theoriser but, what is infinitely more convincing, a practitioner. He expressed himself as being of the opinion that the English system of quantity surveying is needlesaly too complex to be employed in the building and construction world of America. Through observation he has come to the conclusion that we of the United States should evolve a distinctively American system, specially and fully adapted to the conditions as they exist in this country and in each differing section of it.

The owner of the building or other structural work will benefit by the quantity surveying, and consequent accurate lists of materials, by reason of the fact that he will be assured that the contractors' figures are not mere guesswork —a mere gamble, as at present—based, possibly, on error in estimating the "quantity" of work to be done.

It is a great advantage to the architect to be able to feel assured that when a contract is awarded it has gone to a contractor who has made no errors in figuring the quantities required and that no disputes or questioning on this score can arise after the signing of the contract.

The quantity survey will, further than all this, mean a most considerable saving in the contractor's overhead expense in estimating. It will reduce, to the very minimum possible, all oversight of items which may be required in the completion of the job bid on. It is a fact irrefutable that a quantity survey made by a competent surveyor and furnished to ten, fifteen, or more bidders will save much valuable time of nine or more men who otherwise would have to figure out their own in limited time.

As is a well-known fact, a contractor's loss, through inaccuracy in his quantity sheets, affects not only himself, but all others concerned—the building business generally. What might appear to be ever so trifling an error may prove productive of a profit-paralysing result in the end. A losing contract is worse than no business at all, of necessity, as it is bad for contractors, owners, and architects alike. A contract which early reveals the fact—as the work is in progress—that it is to be a losing one seldom, if ever, is executed with the dispatch which any owner has a right to expect. Then, too, the contractor, realising that he is losing because of error in figuring the "quantity" of material needed, is, in nine cases out of ten, prone to pay little attention to the matter of dispatch in completing the work, feeling, naturally, that more is being given to the owner than is actually being paid for.

What, beyond any question, is one of the chief features of the advantages afforded by the quantity survey system is the lessening of the liability of a contractor proving a successful bidder, or being awarded work, by reason of his having made an error in his figuring of the quantity of materials. All of the many consequent evils of a contract so made will be eliminated under the quantity survey system.

The elimination of the irresponsible, unreliable contractor—the contractor who errs in his estimate of materials, who fails to bid on this that, or the other material, or who makes reckless bids, trusting to luck, confusion of interpretation of contract provisions, specifications, etc., and to a possible chance of "bluffing" himself through—is, beyond any question, ample argument, unanswerable argument, why we should have the quantity surveyor as here depicted. It is a well-known and acknowledged fact that the contractor who repeatedly errs rarely produces the quality of work which the architect has a right to expect. Quite to the contrary. He not only injures the more careful and dependable contractor, but he injures as well the architect, injures the material supply business with bad accounts, and injures the owner by delays, inferior work, and possible —usually probable—lawsuits.

Considerable discussion followed. There were those present who expressed the fear that the efficiency of the contractor would be greatly impaired by it, because of the possibility of his getting out of touch with the plans and specifications should he not take off his own quantity lists."

THE FIRE RESISTANCE OF REINFORCED CONCRETE FLOORS.

At a time when the question of reinforced concrete is largely before the technical professions and the question of regulating such structures is receiving the attention of the public authorities concerned, a Report issued by the British Fire Prevention Committee (as Red Book No. 188) dealing with a fire test on a reinforced concrete floor with triangular lattice reinforcement may be deemed to be of special interest.

The prefatory note to the Report indicates that, in comparison with other floor tests, the instructive feature of this investigation is that granite chippings do not appear so satisfactory from the fire point of view as some of the other materials that have been used in the Committee's tests, and, further, that the question of protecting the soffit of the reinforced concrete beams requires careful attention.

It speaks well for the system of construction and the form of reinforcement used that, regardless of what appears to have been an unsatisfactory concrete aggregate, the floor stood up so well and obtained the British Fire Prevention Committee's classification of "Full Protection, Class B," which means a four-hour test with temperatures reaching 1,800 deg. Fahr., followed by the application of water from a steam fire-engine; and it is obvious that, if a better form of concrete had been used and the question of protection had received more consideration, an even better result, with less deflection, must have been obtained—*i.e.*, a result that would have practically left the floor in such a condition that it need not be taken down for reinstatement after a severe fire.

The reinforcement was made and supplied by Messrs. Naylor Brothers, of Huddersfield, the patentees. It was constructed of open hearth mild steel bars, guaranteed to stand a tensile stress of 28 to 32 tons per square inch, with an elongation of 20 per cent. in 8 in. (0·2m.), manufactured by Messrs. Dorman, Long, & Co., Ltd., Middlesbrough.

The internal length of the hut, which was 22 ft. 5 in. (6·83m.), was divided into four bays, three reinforced concrete beams were placed across the hut, the distance from centre to centre of the beams being 5 ft. 9 in. (1·75m.) and the net span 15 ft. 2 in. (4·62m.).

Each beam was constructed with a double reinforcement made up of four frames, each frame consisted of a top and bottom bar fixed at 16 in. centres (0·406m.), connected together by means of a lattice bracing formed of four single triangulations superimposed and rigidly attached to the bars by means of loops formed out of the same rod of steel as the lattice members, thus forming in itself a continuous and rigid steel frame—a distinguishing feature of this system.

The bars were each 17 ft. 2 in. long (5·23m.)—the top bar ¾ in. (0·019m.) and the bottom bar 1 in. (0·025m.) diameter.

The lattice bracing was at an angle of 45 deg. and was made out of ¼-in. round (0·006m.) mild steel to the same specification as the main rods.

These frames are wired together, so that the distance from centre to centre was 2½ in. (0·063m.) and the distance from centres of outside frames to the casing was 1½ in. (0·038m.). The bottom bars were protected by 1½ in. (0·038m.) of concrete, and the top bars by a covering 1⅝ in. (0·041m.) thick.

The beams at the north and south ends were of similar construction, but had only two frames.

The reinforcement for the slab consisted of eighteen steel rods ⅝ in. in diameter (0·016m.) and 25 ft. long (7·62m.), placed at 11½ in. centres (0·292m.). These rods were connected transversely by a double triangulation bracing formed of ¼-in. (0·006m.) diameter steel rods attached to the longitudinal rods by means of the loops as in the case of the girder frames, thus ensuring not only the correct spacing being maintained, but a continuous reinforcement.

After placing in position, the ⅝-in. (0·016m.) steel rods were cranked over the girders so as to bring them to within 1 in. (0·025m.) of the centering.

The thickness of the slab was 5 in. (0·127m.).

The British Fire Prevention Committee is testing one to two large floors every year, and, apart from the non-proprietary systems of construction that they have tested, a number of patented systems have now obtained the highest classification, which gives them a special claim for employment by the public authorities and corporations with whom safety from fire is a matter of importance.

THE BAR-GATE, SOUTHAMPTON.

In view of the contemplated removal of the Bar-Gate, steps are being taken to schedule the structure under provisions of the Ancient Monuments Protection Act which apply to non-inhabited houses and to non-ecclesiastical buildings. The Bar, or North, Gate is one of the four that remained of the seven gates in the walls of, and before, Richard II.'s day, the three others being South Castle, West, and Blue Anchor Gates. The Water Gate was pulled down in 1804. In our number of October 12, 1901, we published an illustrated description of Mr. R. Macdonald Lucas's scheme for preserving the building as the chief gateway into the town, whilst increasing the facilities for street traffic. The plates show the two elevations as unchanged, but with two proposed side-passages, and a widening of the two slypes of 1764-1774. On September 9, 1905, we illustrated the alterations that were carried out by Mr. Lucas, as consulting architect in respect of the works for widening the roadway at High-street and Above-Bar, in conjunction with Mr. W. H. Killick, Assistant Borough Engineer. The alterations comprise the erection on the gate's west side, at the corner of Bargate-street, of new Guildhall Offices, constructed of rough stone (Purbeck Roach), with some half-timbering of framed Baltic oak. These form part of his original improvement scheme for new roads and pathways outside the two flanking towers of the gate.

THE BUILDING TRADE.

THE LONDON DISPUTE.

THE Conference convened by the National Board of Conciliation, which was augmented by additional representatives for the occasion, took place on March 17, when the Board made the following recommendation to the respective parties:—

1. That in the opinion of this augmented Board the entering into a direct agreement between the London Master Builders' Association and the head executives of the various trade unions to the effect that all duly signed rules between the London Master Builders' Association and the local branches of unions shall be rigidly enforced, and the head executives of the various trade unions concerned undertaking under agreement that unless such rules are observed the head executives will not countenance any strike, and will suspend all benefits, and will countersign all rules agreed upon, then such undertaking shall be deemed a sufficient guarantee for their observance.

2. It is further suggested that London come under the conciliation scheme.

On the suggestion of the Chairman the London representatives on the Board did not vote on the resolution, and it was agreed that they should remain neutral.

The next step will be for the parties to consider the recommendation, after which, if necessary, a further meeting of the Board will be held.

It is sincerely to be hoped that this recommendation for the better maintenance of agreements in the London building trade will be accepted by the parties in the dispute as a basis for a settlement.

It comes with the authority of a body which for ten years has successfully dealt with disputes which have arisen in the provinces.

The experience of the National Board of Conciliation during that time has conclusively shown that the general unions, whose representatives sit on the operatives' side of the Board, do loyally carry out their engagements and do insist that their local branches shall abide by the decisions of the Conciliation Boards.

Unfortunately London has hitherto been outside of the national scheme of conciliation, although it has had local Conciliation Boards with each trade with whom working rules have been made.

The experience locally has been such that confidence in the ability of the executives of the local unions has been so far destroyed that difficulty may be felt in believing that the suggestion of the National Board will afford the requisite guarantees for the future observance of agreements; but if the experience of the provinces has been satisfactory, as it has, with only the guarantee afforded by the conciliation scheme, which in effect brings to bear on the observance of working-rule agreements the weight and the authority of the general unions who are parties to the scheme, the London employers may well consider that that, together with the additional guarantee embodied in the proposed undertaking to countersign the local agreements in London, and specifically guarantee their fulfilment, will sufficiently ensure that in future these agreements will be loyally kept. The local operatives, on the other hand, must have realised during the Conference that it is of vital interest to them that the confidence in these agreements which has been lost shall be regained.

They must also realise that if the suggestion is accepted that London should come under the national scheme of conciliation they will have gained a most efficient and valuable remedy for the often abortive results which experience has shown are too often the outcome of the proceedings of local Boards of Conciliation.

The latter, both here and in the provinces, while necessary to initiate the dealing with disputes by means of conciliation, are of little use in serious cases, unless there is a possibility of appeal to higher Boards composed of those who are unaffected by the local feelings inseparable from a dispute.

The solution propounded by the National Board is one which can be accepted by both parties without loss of dignity, which is a good augury for future good relations between the disputants, and its acceptance will prevent the continuance of a struggle which cannot fail to prove gravely injurious to all concerned.

During the period of labour unrest through which the country has been passing Conciliation Boards, as a means of adjusting disputes between employers and workmen, have been more or less on their trial; in the provinces they have emerged successfully from the test, in London they have failed because of their too narrow basis. If the disputants can but realise that fact and broaden the basis of their conciliation arrangements they will have a method of dealing with disputes which will justify the confidence of the building trade of London, as it has justified the confidence of the building trade of the provinces for the past ten years.

London excites the admiration and the emulation of the provinces when she rises, as she often does rise, to the height of a great public occasion.

We venture to say that this is so serious an occasion for the building trade of the whole country that if the London building trade, masters and men, can rise to the level of it and see with hearts and minds the strife and misery and loss which will be entailed upon their brethren in the provinces if this dispute is allowed to go on much longer they will once more excite the admiration and gratitude of the whole country by the frank and loyal manner in which they will take up the suggestion of the Conference and co-operate in making it a success.

PAINTS AND PAINTING.—II.:

PAINT BASES OTHER THAN WHITE-LEAD AND ZINC WHITE.

PAINT MEDIA AND DRIERS.

THE commonest substances which occur to the mind under this title are probable red-lead and oxide of iron. These, however, have considerable limitations in use on account of their colour, and will be referred to in dealing with pigments. There are many white compounds which are obtainable in a state of division at least equal to that of white-lead, while much more stable chemically. What, then, is the property they lack which prevents their more extended use? Usually this is "body" or sometimes cohesion. Body, it should be remembered, depends not only on the base, but on the liquid medium in which it is ground, and many earthy minerals which have very good concealing power when mixed with water are exceedingly poor when ground in oil. Some of these substances, however, have a promising legitimate use as paints or fillers, while some are used as adulterants. The most important are zinc sulphide, barytes, china clay, lime sulphate, and chalk.

Lithophone.

Forty years ago a paint was placed on the market known as Orr's Zinc White, which consisted of a mixture of sulphide of zinc and barytes. This material, or at least a paint composed of the same constituents, has recently come to the fore under the name of "Lithophone"—a name which has recently suffered an etymological mutilation to "Lithopone." One-quarter to one-third of this paint is zinc sulphide and the rest barytes. The latter is obtained by precipitation, which gives a much finer substance than crushed mineral barytes. This base is very permanent, has a good body and colour, is cheaper than the bases previously discussed, and is now often employed for undercoating and in making up second quality enamel paints. There seems to be no objection to its use, and, if it is to be allowed, it should be specified so that the work will benefit by the small decrease in cost. This paint, however, must not be used in conjunction with lead pigments (except sulphate of lead), since the sulphur in the zinc compound will tend to produce black-lead sulphide, and thus cause discoloration.

Barytes.

This compound, known also as heavy spar and chemically as barium sulphate, has a fairly wide natural occurrence usually associated with lead-ore. It has popularly a very bad name in connection with paints, and frequently plays the *rôle* of an adulterant, not only in this, but in several other industries. As, however, this view of its presence is by no means always justified some further comments on the material are called for. There are few substances so unchangeable and insoluble even in the strongest acids as barytes, and few which are more finely divided if prepared by precipitation and dried immediately. When prepared, however, from the natural mineral it is apt to be so coarse as to possess but little body. Since its price (£3 to £4 per ton) is far less than that of lead or zinc whites, there is certainly a temptation to mix barytes with such materials.

Possessed of a good colour, considerable body in its finest state of division and absolute chemical stability, barytes may be a quite legitimate constituent of paint; and, though it contains sulphur, this is not in a form which will detrimentally affect white-lead.

The question of its use, then, resolves itself into a matter of fineness, a property of such importance and so little regarded, that some later allusion must be made to this subject.

Barytes may be distinguished from all other white bases by its complete insolubility in even the strongest acids.

Sulphate of Lime.

Sulphate of lime, either as the mineral gypsum or prepared by precipitation, is a permanent white of good colour when pure which is used as the base of many fillers and also in cheap paints. It is much lighter than white-lead or barytes, but heavier than zinc white. Possessing but poor body when mixed with oil, it is very inferior to many other white bases. Its solubility in water has often been urged against this substance, more in connection with its legitimate use in plasters than in paints, but, as it is only soluble to the extent of one part in 500 parts of water, this is not as serious as is often suggested. This substance is also sometimes regarded with suspicion, because it contains water; but whatever the defects of the material may be, this fact is not detrimental, unless the paint is likely to be subjected to considerable heat, as the water forms part of the compound. It may be well here to explain the difference between water in this state and ordinary moisture. Many substances contain water as an essential part of their composition deprived of which their identity may largely disappear, and such water does not display the miscible properties of free water, which with oil would form an emulsion and prevent the paint from drying. White-lead also contains combined water as one of its essential constituents.

China Clay.

China clay, or kaolin, is, when carefully prepared, a very fine powder of good white tint, and is quite permanent: it has, however, very little body when mixed with oil, partly no doubt owing to its extreme lightness. It is not much used in paints, except in the preparation of certain organic pigments.

Chalk.

The most plentiful and easily-obtained white mineral is ordinary chalk, which is quarried, ground, and washed to free it from impurities, which are mostly siliceous in character. Though chalk is largely used thus prepared under the name of "whiting," or "whitening" with water, as a medium, as, for instance, in ordinary distemper, it is not an attractive material for oil paints, as it is poor in body, and does not possess the chemical stability of the previous materials discussed. Mixed with oil, it assumes a greyish tinge which practically excludes it from use as an adulterant.

PAINT MEDIA.

Many different liquid vehicles have been used in the making up of paints. Some of these merely produce the necessary mobility to admit of the application of the paint, and

evaporate completely when the surface dries, while others undergo chemical or mechanical changes, forming varnish-like solid bodies or applicants.

Two main classes of paints, however, may be distinguished:—(1) Those in which the medium is oil; (2) those in which it is some water, or some aqueous solution. The former, comprising all ordinary oil paints, is the larger class, but the latter, exemplified by tempora paints, has a considerable vogue apart from purely artistic work.

The identification of oils is not always a simple matter, even when unmixed with other paint ingredients, and it is upon the general character of the paint of which they form a part, rather than on individual properties, that they must be criticised by the ordinary user. At the same time, some notion of the characters necessary for a suitable oil should be common knowledge to those responsible for paint specification. Oils may be vegetable, animal, or mineral in origin; among the first group such oils as linseed, cotton seed, poppy, and tung oils may be cited; among the second, menhaden and whale oil; and among the last paraffin and naphtha. Certain oils of the first class have the power of absorbing oxygen when exposed to the air, and being thereby converted in solid resin-like substances. These are known as drying oils, and are alone suitable for media for paints apart from oils capable of evaporation which are added to enable the material to work under the brush more readily, and which are known as "thinners."

There are very few commercial drying oils. Among those that merit mention are linseed, poppy, walnut, and tung oils. The first alone has an extended use, and forms the medium of by far the greatest bulk of commercial paints. Poppy and walnut oils have a limited use chiefly in purely artistic work, while tung or Chinese wood oil finds a limited but extending use in paint work. Another drying oil—the only one of animal origin which finds legitimate employment, and that hardly at all in this country—is American menhaden oil obtained from the fish of that name.

In the case of linseed and most paint oils solidification may be hastened by heating before use. This, however, is not true of all drying oils—the rate of drying of tung oil, for example, is not accelerated by heating.

Heated or "boiled" oil, as it is termed, does not produce so elastic a coat on drying as raw oil, hence it is always desirable to mix a little of the latter with the "boiled" oil for paint work when the former is used.

Linseed oil is often adulterated, sometimes with other vegetable or animal oils such as cotton-seed or whale oil, but since these are bad driers, and offer only limited financial attractions, the adulterant is more frequently mineral oil—*e.g.*, paraffin or rosin oils, which are cheap, the latter being an inferior oil obtained by the distillation of rosin. Mineral oil adulterants and inferior seed and animal oils also are lighter in weight than even raw linseed oil, while rosin oil is appreciably heavier. Adulteration may, therefore, be detected by ascertaining the weight of a given bulk of the oil that is its "specific gravity." If the weight of a given bulk of water be called 1,000, that of the same bulk of raw linseed oil should be 932 to 930, and that of "boiled" oil about 945. Such determinations cannot, of course, be made for oil mixed with other paint ingredients, but when its quality can be considered alone its "bulk weight" can be determined by anyone in a moment by the use of a float with a long stem bearing numbers above and below 1,000, at which number the float stands in the water. The lighter the oil the deeper will the float naturally sink into it, and if it does not come to rest opposite the numbers referred to, for raw and "boiled" oil respectively, adulteration may be surmised, the exact nature of which may then, if necessary, be determined by an expert. This instrument, known as a "hydrometer," involving an outlay of but two or three shillings, can be similarly used for checking the purity of any liquid which possesses a definite composition or a mixture of liquids which have a recognised commercial proportion.

Figure showing Hydrometer.

Tung or Chinese wood oil has a specific gravity of about 940, and is rather less limpid than linseed oil, it dries more quickly than raw linseed oil, and is duller when solid. It is said to have a tendency to form wrinkles, but more experience in its use is required before its properties can be fairly assessed. If it is heated to the temperature of boiling water for two or three days it turns into a jelly, which does not again become liquid, which fact forms a useful distinguishing property not possessed by other oils.

Water solutions as media for paints include solutions of size or gelatine, egg-yolk, albumen, lime-water, and the silicates of potash or soda. A description of these media would carry this discussion too far into the realm of purely artistic work to make it admissible here, but "tempora," which in its widest sense includes distemper, may be referred to as being applicable to wet surfaces impossible for oil paints, and as thus presenting a solution of the difficulty which sometimes arises when wet walls must be decorated. Zinc white forms a most excellent base for tempora work. The surface to be painted is first washed over with weak size, and then treated with the base (and suitable pigments) made up in an aqueous solution of yolk of egg or albumen (prepared white of egg), or, since these media are costly, more usually a solution of good quality size. Lead bases and pigments must not be used with yolk or white of egg since these bodies contain sulphur. When dry, the surface may be subsequently varnished should further protection be necessary, and, if this is effected some time after painting, it is advisable to sponge the surface over first with a little turpentine.

Thinners and Driers.

Ordinary paint oils are too viscous to admit of suitable working under the brush when mixed in proper proportion with the solid ingredients, hence some mobile liquid is necessary in addition. This is known as a thinner, and is usually turpentine (by which what is really oil of turpentine is now understood), though various substitutes often take its place.

Thinners evaporate when the paint dries, and therefore they play no permanent part in the composition of the material, but it is important that this evaporation should not be rapid enough to injure the homogeneity of the paint surface, and this forms one objection to many bodies which are frequently found in thinners at the present day. The amount of volatile solvent legitimately added must not exceed that actually necessary to render the paint workable. An excess will, of course, render the paint applicable with reduced labour, but it will result in too great an area being covered by a given quantity of paint, so that more coats will be required to give a satisfactory surface.

Turpentine is obtained from a variety of pine-trees by the distillation of the resin collected therefrom, common rosin remaining behind, from which rosin spirit and rosin oil are obtained by the further distillation of this residual material. Obtained from various sources, turpentine differs somewhat in its character, but should have a specific gravity (easily ascertained as explained for paint oils) of about 867, and a pleasant resinous smell. A very useful means of assessing its quality is to place a drop upon paper, when, on gently warming, the whole should evaporate and leave no stain in the case of a good sample.

The substitutes or additions to turpentine are usually benzolene, shale naphtha, paraffin oil, rosin spirit, or methylated spirit, which can sometimes be detected by comparing the smell with that of a known pure sample. These additions alter (generally reduce) the specific gravity, and increase the inflammability of the liquid. Rosin spirit, however, sometimes added, increases the specific gravity, and has a characteristic smell which aids its detection.

How far substitutes for turpentine are admissible and to what extent they must be regarded as adulterants has yet to be decided. It is possibly true that any not too volatile oil which is capable of complete evaporation may be fairly used as a paint thinner since its operation is transient only. Such authorities as Hurst and Church by no means condemn some of the substitutes referred to, but, if admitted, care should be taken that they themselves are properly prepared, and are not, as some may well be, contaminated with non-drying or brittle residues which will remain in the paint.

Driers.

The rate at which paint will dry possesses, of course, very considerable commercial importance, and, although it is desirable to allow the drying period to be prolonged as much as possible, it is in practice usually necessary to add a small quantity (½ to 1 per cent.) of some compound known as a "drier" which will act as a carrier of oxygen, from the air to the oil. In the preparation of "boiled" linseed oil driers are usually added as part of the boiling process. All liquid films which dry require time if they are to turn into tough elastic solids, which alone will stand the wear to which paint is subjected, hence excessive acceleration in the drying rate is injurious.

Most lead compounds induce drying properties in drying oils, and many are used for the purpose, but, where the presence of lead is objectionable, compounds of manganese such as the borate form efficient substitutes, and may be used in smaller quantities. The more thorough the intermixture with the oil the smaller the proportion of drier necessary and the more even its effect; and this has led to the use of organic compounds of lead and manganese made from oils or resins, which are readily miscible with paint vehicles. The chief objections to these compounds lies in their tendency to introduce by their decomposition undesirable organic substances into the oil. It should be noted that the rate of drying does not increase with the proportion of driers added after a certain small percentage is reached. Driers should always be used sparingly, as in excess they are admittedly injurious.

WAGES IN THE BUILDING TRADE.

Barrow-in-Furness.—On and after April 1 an increase in wages of ½d. per hour (9½d. to 9¾d.) will be paid to the plasterers in this district.

Birmingham.—At a special meeting of the Midland Centre Conciliation Board, held on March 4, an appeal was heard from the bricklayers of Birmingham. The point at issue was that the operatives complained that an employer had engaged paviors to lay blue brick paving on the floor of a workshop, and they claimed that this work should be done by bricklayers. After hearing the evidence from both parties, the Board unanimously decided: "That in future all brick paving on the floor of a workshop in Birmingham shall be bricklayers' work."

Burton-on-Trent.—The masters in this district have met the building trade operatives with reference to the proposed alteration of working rules and an advance in wages. Many previous meetings have been held to discuss the subject, and the outcome was an offer of the employers of ½d. per hour advance to all trades, with the exception of the plumbers, whose advance would be 1d. per hour, conditionally upon the counter rules from the employers being substantially accepted. The operatives' delegates could not see their way to agree, and eventually a ballot was taken of the various lodges concerned, with the result that the offer of the employers was accepted by the stonemasons, plumbers, and plasterers. The carpenters and joiners, bricklayers, painters, and labourers decided to accept the rules, but to submit the wages question to the Building Trades Conciliation Boards. The respective rates of pay and the increase which was asked for are as follows:—Bricklayers, 8½d. to 9½d.; carpenters and joiners, 8½d. to 9½d.; stonemasons (bankers) 8½d. to 9½d., (fixers) 9d. to 10d.; plumbers, 8d. to 9½d.; painters, 7½d. to 8½d.; labourers, 5½d. to 6½d.

Bury.—The slaters and tilers have sent in an application for an advance in wages of 1d. per hour (9d. to 10d.) from May 1, 1914. A notice has also been given by the stonemasons demanding an advance of 1d. per hour (10d. to 11d.) as from May 1, 1914, and various alterations to the working rules.

Chorley.—The plumbers are demanding an advance of ½d. per hour (9d. to 9½d.), with proposed new rules. The painters are asking for an advance of 1d. per hour (9d. to 10d.), and the stonemasons for an advance of 1d. per hour (9½d. to 10½d.).

Harrogate.—His Honour Judge H. Y. Stanger, K.C., the arbitrator appointed by the Board of Trade to consider matters in dispute between the master and operative painters, has issued his award. Judge Stanger, having heard the parties, raised the wages of the painters from 8d. to 8½d. per hour, and made other alterations in the working rules.

Leamington.—The stonemasons have been granted an increase in wages of ½d. per hour (8½d. to 9d.), to take effect on April 1 next.

London.—The invitations to the conference convened by the National Board of Conciliation for the Building Trades, for the purpose of considering and suggesting some satisfactory means of securing the honourable observance of trade agreements, were issued to the parties concerned in the London dispute on March 12. The Council of the London Master Builders' Association considered the invitation at a meeting held on March 13, after which the following official statement was issued:—"The Council of

the London Master Builders' Association received an invitation from the National Board of Conciliation yesterday to attend a conference on Monday next, which was considered by them at a meeting this morning, and the following resolution was passed—'That this Council can only attend the proposed conference on the basis of the resolution of the National Federation Executive Council of 10th instant. The invitation received is not in accordance with such resolution, and this Council is therefore unable to accept it.' The Secretary at once forwarded the same to Messrs. A. G. White and F. Chandler, the Joint Secretaries of the National Board of Conciliation, accompanied by a letter setting out the reasons of the L.M.B.A. refusal as follows—'I am instructed to explain that the objections of my Council arise, *inter alia*, in consequence of information received that the invitations have been extended to, amongst others, furniture trades, French polishers, smiths and hammermen, house and ship painters, electricians, asphalt workers, etc. My Council is prepared to meet in conference in conjunction with the National Board of Conciliation only the trades involved in the present building dispute in London, viz., carpenters and joiners (two societies), plumbers (two societies), plasterers, stonemasons, bricklayers, mill sawyers, smiths and fitters, engine and crane drivers, and united builders' labourers, they being the trades with whom this Association has had or have working rule agreements. With regard to the reference of the augmentation of the National Board, the five members of my Council who have been appointed to serve are as follows:—Messrs. W. Shepherd, E. J. Brown, F. Higgs, F. L. Dove, and F. G. Rice. As far as the augmentation of the number of operatives, my Council presumes the members are being appointed from the Operative Unions affected in accordance with the last clause in the resolution of the National Federation Executive Council. (Signed), S. B. Depree, Secretary, L.M.B.A." The resolution of the National Federation Executive Council of the 10th inst. was as follows:—"That in reference to the present dispute in the London district, it is resolved that before any definite action is taken by the National Federation, the Council of the London Master Builders' Association and two members of each of the London branches of the trade unions involved be invited to meet the National Building Trades Conciliation Board in conference for the purpose of considering and suggesting some satisfactory means of securing the honourable observance of trade agreements. And, further, this Council is of opinion that the Board should invite to sit with it representatives of the headquarters of the Operative Unions affected who are not already represented on the Board." The objection of the London Master Builders' Association was considered by the Board, and eventually an understanding was arrived at which sufficiently met its objections, and on March 17 the conference proceeded with all parties present. The conference opened at Kingsway Hall at 10.30 a.m., and resumed at Koh-i-Noor House, Kingsway, after tea. The meeting terminated at 10.15 p.m., when an official statement was issued as follows:—"The London Dispute. The conference convened by the National Board of Conciliation, which was augmented by additional representation for the occasion, took place to-day, when the Board made the following recommendation to the respective parties—(1) That in the opinion of this augmented Board the entering into a direct agreement between the L.M.B.A. and the head executives of the various trades unions to the effect that all duly signed rules between the L.M.B.A. and the local branches of unions shall be rigidly enforced, and the head executives of the various trades unions concerned undertaking under agreement that unless such rules are observed the head executives will not countenance any strike, and will suspend all benefits and will countersign all rules agreed upon, then such undertaking shall be deemed a sufficient guarantee for their observance. (2) It is further suggested that London come under the Conciliation Scheme. On the suggestion of the Chairman, the London representatives on the Board did not vote on the resolution, and it was agreed that they should remain neutral. The next step will be for the parties to consider the recommendation, after which, if necessary, a further meeting of the Board will be held.

Nottingham.—The carpenters and joiners in this district will receive an increase in wages of ½d. per hour (9½d. to 10d.) as from April 1.

Oldham.—The following notices for alterations in working rules have been received from the operatives in this district:—Bricklayers for an advance of 1d. per hour (10½d. to 11½d.) as from May 1, 1914; carpenters and joiners for an advance of 1d. per hour (10d. to 11d.), and other alterations; stonemasons for an advance of ½d. per hour (10d. to 10½d.) as from May 1; painters for an advance of 1½d. per hour (9½d. to 10½d.), and other alterations; plasterers' labourers for an advance of 1d. per hour (7½d. to 8½d.); bricklayers' labourers for 1d. per hour (7d. to 8d.). The navvies are now organised under the National Union of Gasworkers and General Labourers, and are asking for an advance of ½d. per hour (6½d. to 7d.) and a code of working rules.

Sheffield.—An advance in wages of ½d. per hour (9½d. to 9½d.) has been granted to the carpenters and joiners as from March 1. The wages of the stonemasons will be increased ½d. per hour (10d. to 10½d.) on April 15.

Worcester.—The following advances in wages are notified to take effect on April 1:—Carpenters and joiners from 8½d. to 9d. per hour, bricklayers from 8½d. to 9d. per hour, and labourers from 5½d. to 6d. per hour.

Wrexham.—An advance in wages of ½d. per hour (8½d. to 9d.) will be paid to the bricklayers in this district on and after April 1.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

THE Building Act Committee of the London County Council have consented to the following applications under the London Building Acts, 1894 to 1909:—

Lines of Frontage and Projections.

Strand.—Iron and glass hood over the entrance to No. 52, Jermyn-street (Harrods, Ltd.).

Wandsworth.—Houses in Burntwood-lane, Herondale-avenue, and Loxley-road, Wandsworth (Messrs. Holloway Brothers (London), Ltd.).

Woolwich.—Wooden bay-windows to eight houses on the western side of Footscray-road, Eltham (Messrs. Pepler & Allen for the New Eltham Tenants, Ltd.).

Width of Way.

Islington, East.—Building at the rear of No. 122, Mildmay-road, Islington (Mr. C. C. Cooper).

Width of Way and Lines of Frontage.

Holborn.—Building upon a site abutting upon Kingsway, Kemble-street, and Keeley-street, Holborn (Messrs. G. & T. S. Vickery for the General Electric Company, Ltd.).

Marylebone, East.—Addition at No. 14, York-terrace, St. Marylebone (Messrs. Clarke & Bracey for Messrs. Dickie & Scott).

Marylebone, West.—Building at No. 27, Grove End-road, St. Marylebone (Messrs. A. H. Paine & Son for Mr. J. H. Roberts).

Wandsworth.—Addition at Gate Lodge, Priory-lane, Roehampton (Messrs. W. Adkins & Son).

Width of Way, Projections, and Construction.

Hoxton.—External iron structure over the public way of Merritt's-buildings, Worship-street, Shoreditch, and connecting blocks of the premises of the Home and Colonial Stores, Ltd. (Messrs. Gale, Durlacher, & Emmett for the Home and Colonial Stores, Ltd.).

Space at Rear.

Islington, North.—Ten houses on the northern and eastern sides of Fitzwarren-gardens, Islington (Edmondsons, Ltd.).

Alteration of Buildings.

Hoxton.—Omission of a parapet to a party wall at No. 1, Hoxton-square, Hoxton (Messrs. Lovegrove & Papworth).

Strand.—Roof of the proposed building upon the site of Nos. 162 and 164, Wardour-street, having a slope of 75 degrees (Messrs. W. Woodward & Sons).

Formation of Streets.

Kensington, North.—Laying-out of a new street for carriage traffic in connection with the erection of blocks of buildings upon a site on the northern side of Edinburgh-road, Kensington (Great Western Railway Company).

Cubical Extent.

Paddington, South.—Deviation from the plan approved for additional cubical extent in respect of the premises of Messrs. W. Whiteley, Ltd., Queen's-road, Bayswater (Messrs. J. Belcher, R.A., & J. J. Joass).

St. George, Hanover-square.—Additional cubical extent in respect of alterations at Nos. 421 to 429, Oxford-street, to abut also upon Lumley-street and Balderton-street (Messrs. H. O. Ellis & Clark for Messrs. Selfridge & Co., Ltd.).

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ABERDEEN.—The Provincial Committee for the Training of Teachers propose purchasing 20 acres of the Burnside Estate from the Corporation for a hostel for lady students. The Board of the Royal Aberdeen Hospital has purchased a site in the grounds of Ashley for a new hospital.

Ashton-under-Lyne.—Messrs. Ruttenau & Son's plan of new sheds at Good Hope Mill have been approved.

Atcham.—The L.G.B. have sanctioned the borrowing of £998 by the U.D.C. for the purposes of the Cressage housing scheme, and the Surveyor has been instructed to prepare plans and specifications for the work.

Atherstone.—The B.G. have decided to appoint an architect to prepare plans for alterations to the workhouse.

Ballinluig.—Lord Tullibardine has presented a site for a public hall, and a committee has been appointed to consider a building scheme.

Barnes.—Plans passed by U.D.C.:—Two houses, Bicester-road, Mortlake, Messrs. Brewer, Smith, & Brewer; additions, 13, Ranelagh-avenue, Messrs. Charles Saunders & Son; gymnasium, Alder-road, Mr. William H. Warner; two houses, Grange-road, Mr. C. J. Kerven; alterations, 15, The Crescent, Mr. J. E. Walker.

Bentley.—The U.D.C. have decided to purchase 4 acres of land for the erection of fifty houses. The planning has been undertaken by Mr. G. Whitley, Surveyor to the Bentley Council, and he proposes to erect, roughly, twelve to the acre. They are to be built in blocks of not more than five, and the building line is to be alternately advanced and retreated in the hopes of doing away with a uniformity which grows monotonous.

Bexley.—Plans passed by U.D.C.:—Alterations to 196, Broadway, Bexley Heath, for Mr. Monk, submitted by Mr. W. Pearman; new branch, Broadway, Bexley Heath, for the Royal Arsenal Co-operative Society, submitted by Mr. A. H. Durnford; alterations to "The Eagle" beer-house, Broadway, Bexley Heath, for Messrs. J. Lovibond & Sons, Ltd., submitted by Mr. Alfred Roberts; motor shed, Brampton-road, Bexley Heath, for Mr. C. Lambeth, submitted by Mr. W. B. Butler; nine shops, Park View-road, Welling, for Mr. J. E. Morgan, submitted by Mr. W. Pearman; sanitary additions to Belvedere Villa, Upton-road, for Mr. L. Thorpe, submitted by Mr. F. C. Midmore; drainage of 295, Broadway, Bexley Heath, for Dr. Sunderland, submitted by Messrs. W. & A. Smith.

Bletchley.—Plans passed by U.D.C.:—Two houses in Tavistock-street for Mr. J. Hill; a house in the same street for Mr. Sillars; house in the same street for Mr. Wright; a villa in the Whaddon-road for the Cottage Homes Syndicate; two houses for Mr. Yorrell on the Leon Avenue Estate; eleven cottages in the Park Hotel Estate for Mr. Yirrell; and house and shop on the same estate for Mr. Yirrell.

Blackpool.—A L.G.B. inquiry has been held into the application of the T.C. to borrow £2,700 for the enlargement of Cocker-street baths.

Braintree.—The L.G.B. have held an inquiry relative to the application of the R.D.C. for sanction to borrow £1,000 for the erection of dwellings near the water tower on the High Garrett-road.

Bristol.—The T.C. have decided to provide a municipal lodging-house for women in Kingsquare at a cost of £2,000 and extend the municipal lodging-house for men at an outlay of £3,516. Land at Avonmouth Dock is to be leased to Messrs. John Shearman & Co. for an extension of their workshops and the erection of an office, and to Messrs. T. Borthwick & Co. for the erection of an office.

Bromley.—Plans passed by T.C.:—Messrs. Hayward & Maynard's additions to Woodcote, Elmstead-lane; Mr. A. J. Bartlett's motor-house, Wychelm, London-lane; Mr. F. G. Crickett's alterations to 25, The College, London-road.

Burton-on-Trent.—The T.C. are selling land to the Birmingham Waggon Company as a site for new works.

Cannock.—Plans passed by U.D.C.:—House, Lloyd-street, Cannock, for Mr. F. D. Barnacle; house, Beech Tree-lane, for Mr. G. T. Turner; house, Heath Gap-road, for Mr. J. Shakespeare; two houses, North-street, Bridgtown, for Mr. T. Pearson; two houses, Pye Green-road, for Mr. T. C. Longstaff; and two houses, Huntington-terrace-road, for Mr. H. Darrall.

Carlton.—A new bridge is to be built by the C.C. at Carlton at a cost of £16,000.

Chatham. — Plans passed:— Rebuilding slaughter-house, 161, High-street, for Mr. H. Gurr; six houses, Ewart-road, for Mr. E. J. Knowler; workshop, Brook, for Messrs. J. Presnail & Sons; bungalow, Hook-road, for Mr. W. H. Brake; stable and cart shed, Hook-road, for Mr. J. W. Bruce; stable and stores, Union-street, for Mr. H. Hales; bungalow, Hook-road, for Mr. Dolphin.

Chirk.—Plans have been approved for the erection by Lord Howard de Walden of two cottages on land adjoining the Station-road.

Coalville.—Plans passed by U.D.C.:—Two houses, Highfield-street, Coalville, for Mr. F. M. Rogers; house, London-road, Coalville, for Dr. Jamie; house, Meadow-lane, Coalville, for Mr. G. Fern; seven houses, Hermitage-road, Whitwick, for Mr. A. Vesty; proposed main hall, Conservative Club, Hugglescote.

Congleton.—Plans passed for house in Leek-road, Mossley, for Mr. F. W. Gibson, and house by Mr. A. J. Worrall in Howey-lane.

Connah's Quay.—The U.D.C. have forwarded an application to the L.G.B. for power to borrow £10,450, which will be involved in erecting a town hall and supply the district with electric light.

Cookham.—Plans passed by the R.D.C.:—Mr. G. O. Smith, new laundry cottage, Shottesbrook; Mrs. Partlo, detached cottage, Furze Platt; Mr. W. Frere, additions, Holm Close, Pinkney's Green; Mrs. Courtenau, garage, Old Dutch House, Bray; Messrs. Boyd & Sons, boiler-house, Lee Farm House, Hurley; Mr. J. L. Bissley, additions, Lane Farm, White Waltham; Mr. Stanley Mead, detached cottage, Malvern-road, Furze Platt.

Cuckfield.—The U.D.C. have passed plans for three cottages, and they will be forwarded to the L.G.B.

Darlington.—Plans passed by T.C.:—Mr. J. E. Chilton, six houses in Brickburn-road, three houses in Orchard-road, and a house in Woodlands-road; Mr. C. Ross, three houses in

* See also our list of Competitions, Contracts, etc., on page 370.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Ascot	10	10	10	10	10	10	9	6½	6½	6½
Ashford	10	10	10	10	9½	9	9	6½	6½	7
Basingstoke	9	9½	9	9½	9½	9	7½	6½	6½	6½
Bexhill-on-Sea	9	10	9½	10	10	9½	8½	7	7	7½
Bideford	10	10	9	9½	9½	10	8½	7	7	7
Bilston	9½	9	8½	8½	8½	9	8½	6½	6½	6½
Blyth	9½	9½	9½	9½	9½	9½	8½	7	7	7
Bo'ness	10	10	9½	9½	9	9½	8	7	7	7
Bolton	10	9½	9½	9½	9½	9½	8½	6½	6½	6½
Bridgwater	9	9½	9½	9½	9½	9½	7½	6½	6½	6½
Bury	11½	11½	11½	11½	—	1s.	9	7½	7½	7½
Buxton	8–9	8	8	—	—	—	—	—	—	—
Chesterfield	9	9	9	9	—	8	7½	6½	6½	6½
Colchester	9	9	9	8	—	9½	8½	6½	6½	6½
Cottingham	9½	9½	9½	9½	9	9½	7½	6	6	6
Crewe	9½	9½	9½	9½	—	9½	9	6½	6½	6½
Dalkeith	9	9	9	9	—	9	7½	6	6	6
Darwen	7½	7½	8	8	7½	7½	7	5–5½	5–5½	5–5½
Dereham	8½	8½	8½	8½	—	8½	7½	5½	5½	5½
Dover	8	8	7½	7½	7½	8½	7½	5	5	5
Doncaster	7½	8½	8½	7½	7½	8½	7½	5½	5½	5½
Dunfermline	7½	8	7½	8	7½	7	6½	5	5	5
Dunoon	7½	7½	7½	7½	7½	7½	7	5	5	5
Eastbourne	10	10	9½	9	9½	9½	9½	6½	7	7
Eccles	10	10½	10	10½	9	10	9	—	—	—
Elgin	11	11	11	10	10	10½	9½	6½	6½	6½
Liverpool	10	10½	10½	11	9	10	9½	6½	6½	7½
Manchester	10	10½	10	9½	9	10	9½	6	7	7½
Alton	9½	10	9½	9	8½	9	8½	5½	6	6
Seaton	10	10	10	10½	9	10½	9	7	7	7
Nottingham	9½	9½	9	9	9	9	8	6	6	6½
Oxford	9½	9½	9½	10½	9	9½	9	7	7	7½
Penrith	10	9½	9½	10½	9	9½	9	7	7	7½
Perth	8	8	8	8	8	8	7	5	5½	5
Redbridge	9	9½	9½	9	8	9	7	5½	5½	5½
Ryhope	9	8	8½	8½	8	8½	7	6	6	6
Scotland	9	9	9	9	Piece work	9	7	6	6	6
St. Albans	9	9	9	10	9½	9	8	6	6	6
Skye	—	10	10	—	—	—	8½	7	7	7
Solihull	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Swansea	9	9	9	9	8½	9	8½	6	6	6
Torquay	9	9	9	9	8½	8½	8½	6	6	6
Durham	8	9	8½	9	9	8½	7	5½	5½	5½
Wakefield	11	11	11	10½	10	10	9½	6½	6½	6½

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

Kilnock-street; Mr. J. W. Watson, two houses in Palmer-road; Messrs. Airey & Bainbridge, house in Linden-avenue and house in Thompson-street; Mr. A. W. Roberts, hall in connection with Harrowgate-hill Reading-room; and Messrs. R. Blackett & Son, two houses at the corner of Beaumont-drive and Woodlands-road.

Dartmouth.—The Admiralty contemplate an expenditure of £95,000 on the Naval College, and, in addition, £5,450 will be required for the erection and furnishing of barracks for seamen.

Dewsbury.—Plans passed:—Mr. J. Crossley, fifteen houses, Savile Town; Mr. John Longden, additions to houses, Reform-street, Dewsbury; and Messrs. N. H. & H. Broadfield, two houses, Chapel-lane, Thornhill.

Doncaster.—The latest of new collieries to be sunk in the Doncaster district is to be practically a German undertaking. A model mining village will be fashioned on German experience, and central baths at the pit head for miners will also be provided. The R.D.C., which has already a scheme in hand for town planning for Askern and district, has decided to proceed with another scheme for Carcroft and neighbourhood. The proposed area is one of 3,560 acres, and consists largely of agricultural land, but building development will be necessary owing to the presence in the area of the Bullcroft Colliery. It is expected that eventually there will be a population of 21,000 around the colliery, which will mean that about 2,000 houses will be required.

Doncaster.—The contract for erecting the new Masonic Hall for the Doncaster Masons, at the corner of Priory-place and Printing Office-street, has been let to Mr. Paul Rhodes, of Leeds and Doncaster. The architect is Mr. Percy Robinson, of Doncaster. The magistrates have granted a licence to the People's Refreshment Association for premises to be erected at Woodlands. Mr. Walker is the architect, and the estimated cost of the building is £4,500.

Douglas.—The Higher Education Board of the Eastern District of the Isle of Man has decided to erect a new secondary school to accommodate 400 scholars at an estimated cost of £21,000. The Board decided to invite competitive plans for the school. A number of prominent architects in Liverpool and Leeds are to be asked to compete. Mr. E. R. Robson, of London, is to be appointed assessor.

Dover.—A L.G.B. inquiry has been held concerning the T.C.'s application for sanction to loans of £2,665 for repaving Folkestone-road, and £700 for constructing tennis courts at Maison Dieu grounds.

Dudley.—A scheme is proposed by the E.C. for the erection of a hostel for men in connection with the training college.

Durham.—The B.G. have decided to erect a hospital for eighty beds and that six architects be asked to compete.

Earby.—The Earby Company have decided to erect a large new shed.

Eccleshall.—Costing, it is estimated, £5,800, a new hospital for children is to be erected.

Edinburgh.—Warrants granted by the Dean of Guild Court to Messrs. Brown & Grieve for four houses at Brunstane-road, Joppa, and to Messrs. James Waldie & Sons for cottages, etc., at the lane off Haymarket-terrace.

Evesham.—Plans passed:—Two semi-detached dwelling-houses in Croft-road for the Rev. Wright Shovelton; new shop buildings for Messrs. Fowler & Son, at 31, High-street.

Foleshill.—Plans passed by R.D.C.:—Rebuilding of the Old Crown Inn, Windmill-lane, for Messrs. Ind, Coope, and Co.; alterations and additions to the Green Man, Hall-green, Foleshill, for Messrs. Phillips & Marriott, Ltd.; alterations to the Park Gate Hotel, Holbrooks, for Messrs. Mitchells & Butlers, Ltd.; alterations to Royal Hotel, Little Heath, Foleshill, for Messrs. Phillips & Marriott, Ltd.; two houses, Little Heath-road, for Mr. T. Hackett; and one house, Bedlam-lane, for Mr. Claridge.

Frinton.—Plans passed by U.D.C. for house and shop in Connaught-avenue for Mrs. K. Underwood.

Glasgow.—Warrants granted by Dean of Guild Court:—St. Ninian's Episcopal Church, new sacristy on the south side of that church in Pollokshaws-road; Clydesdale Lawn Tennis Club, pavilion at Titwood Park; Messrs. Sadler & Co., soap manufacturers and oil merchants, buildings in Colvend-street; Mr. J. W. Gordon Oswald, of Scotstoun, to form streets, lanes, and sewers on the lands of Scotstoun, Balshagray, and Broomhill; Messrs. J. Colquhoun & Co., Netherton-road, Temple, two workshops on the south side of Netherton-road; the School Board of Glasgow, school buildings in Hathaway and Shakespeare streets, Maryhill; Mr. Norman M. Allan, 28, Argyle-street, and 9, Virginia-street, alterations for a picture house; the Central Cinema Syndicate, Ltd., 68, Bath-street, to convert part of 20 to 22, Jamaica-street, into a picture house or theatre, tea rooms, and shops; Mr. Hugh Mair, 9, New-street, Shettleston; one-story cottage at Springfield-road, Shettleston; Clyde Navigation Trustees, 16, Robertson-street, houses, Renfield-road, Shields Farm; Loyal Order of Ancient Shepherds Friendly Society, 27, Bath-street, additions to property at 22 to 29, Bath-street; Messrs. John Menzies & Co., Ltd., wholesale booksellers, West Nile-street, to take down existing buildings and erect new buildings in West Nile-street.

Gobowen.—Over £1,000 has been collected for the proposed new church, and a committee, of which General Montgomery is treasurer, has been appointed to take steps to obtain a design. The desire is to obtain a design for a stone church with towers to cost £2,500, including seating, heating, and lighting, and to accommodate 350 people.

Gourock.—The county authorities have agreed to take over part of the Shore-street property owned by the Council for the purpose of erecting a new police-station and supplementary buildings. The Corporation will also proceed to build on an adjoining site the Burgh Chambers that have been under consideration for some years.

Grays.—The architect, Mr. C. M. Shiner, has submitted draft plans for additions to the administrative block, including bedrooms and bathrooms for the nurses, to the B.G. The cost will be £750. The plans are to be considered.

Greenock.—The Dean of Guild Court have passed plans for ten cottages in Border-street by Greenock Garden Suburb Tenants, Ltd.

Halesowen.—The R.D.C. have passed plans for a Liberal Club at Hill.

Hove.—The T.C. propose to expend £10,000 on the widening and improvement of Hove-street, the thoroughfare running from Sackville-road to the sea. This includes £4,500 to be paid to the West-street Brewery Company for the rebuilding of the Ship Inn.

Hythe.—At the last meeting of the T.C. the scheme for the new concert hall, which it is proposed to erect at a cost of £4,000, was considered. Prizes of £50, £25, and £10 are to be offered in competition for designs.

Lanchester.—The justices have passed plans submitted by Mr. George T. Wilson, architect, of Blackhill, for the reconstruction of the premises of the East Kyo Inn, near Annfield Plain, for Messrs. W. B. Reid & Co., of Newcastle.

Linthwaite.—Plans passed for lock-up shop at Market-street, Milnsbridge, for Mr. C. H. Horsfall.

Mansfield.—The L.G.B. have conducted an inquiry into an application by the T.C. for sanction to a loan of £5,000 to build a hospital.

Midsomer Norton.—The U.D.C. have passed plans for additions to Bainsbury House, Stratton-on-the-Fosse, for the Downside Abbey authorities, and for two cottages on the Old Fosse-lane, Welton, for the Duchy of Cornwall.

Mossley.—Messrs. Bottomley & Sons, doublers, of Mossley, have decided to purchase the Union Mill, which was destroyed by fire some time ago. They intend to rebuild part of the old mill and install doubling plant.

Newport, Shropshire.—Lady Boughey has left £5,000 to build a cottage hospital.

Osborne.—It is intended to enlarge the Royal Naval College. A sum of £102,000 is to be spent, part of which will be devoted to improving the existing accommodation, and part to the provision of new buildings.

Reigate.—Plans passed by R.D.C.:—House, Waterhouse-lane, Kingswood, Mr Charles Fitch, Kingswood; house, Hooley Bottom, Mersthan, Mr. R. H. Stephney; house and engine-house, Buckland-lane, Kingswood, Sutton District Water Company.

Richmond, Surrey.—Plans passed by T.C.:—Messrs. Jarman & Co. alterations to Verandah House, Richmond Green; Messrs. Jarman & Co., alterations to 72, Hill-rise; Mr. C. Ashworth, new conservatory, Ancaster Lodge, Queen's-road.

Rochester.—Plans passed:—Two houses for St. Margaret-street for Mr. W. Edmonds; two houses, Jersey-road, Strood Intra, for Mr. F. Holmes; and six houses, Ethelbert-road, St. Margaret, for Mr. J. H. Durrant.

Rothes.—Plans passed for a byre and straw shed in Green-street by Mr. H. Paterson.

Rothesay.—Rothesay Harbour Trust have asked Mr. J. B. Brodie, C.E., to prepare a rough plan and estimate on the lines of a scheme suggested in 1905 by Captain James Williamson for providing Rothesay Pier buildings with an overhead promenade.

Rynton.—Plans approved for the Stella Coal Company for the erection of thirty-two houses at Greenside. The U.D.C. have decided to take preliminary steps towards the erection of twenty-five houses for the working classes.

Sawbridgeworth.—Plans for a house in High Wych-road for Mr. R. Camp have been passed.

Sidmouth.—It is proposed to add a new wing to the Victoria Cottage Hospital.

Skegness.—Plans passed for a new picture palace for Mr. Fred Clements, which will cost in the neighbourhood of £5,000, and for the Earl of Scarborough's beach café and shops.

Slough.—Plans passed for additions to Messrs. Horlick's factory.

Southend.—The L.G.B. have held an inquiry with reference to the applications of the T.C. for sanction to borrow £3,650 for the erection of shelters on the western esplanade and South-church beach; £2,800 for the extension of the baths, conveniences, etc., at Pier-hill-buildings; £300 for the provision of a concert platform and alterations at Pier-hill concert enclosure; and £250 for the construction of a bridge over the brook at Southbourne-grove.

Spalding.—The Ecclesiastical Commissioners have made a grant of £400 towards the fund for the building of a new vicarage house. As soon as a suitable site can be obtained the building will be commenced.

Stafford.—The L.G.B. have held an inquiry into an application by T.C. for sanction to borrow £13,700 for gasworks' extension.

Stockton.—Plans passed by U.D.C.:—Estate plan of part of the Sunderland Glebe Estate, off Yarm-road; sixteen houses by Messrs. Watson Bros. in Windsor-road, and eight houses by Mr. R Gaunt in Austin-avenue.

Swadlincote.—Plans presented by Miss Michael for two houses in Sunnyside, Newhall, have been approved.

Swindon.—Plans passed by T.C.:—Mr. T George, four houses, Wells-street; Messrs. Bishop & Fisher, for Usher's Wiltshire Brewery Company, alterations and additions, Greyhound Hotel; Mr. H. C. Cook, alteration to houses, Avenue-road; Messrs. Bowly & Co., cellarage, North Wilts Brewery. Messrs. Bishop & Fisher have prepared plans for a factory for Messrs. J. Gundry & Co., rope and twine manufacturers, at Swindon.

Torquay.—Mr F. G. Moore, B.Sc., M.Inst.M.E., architect and surveyor, of 9, Fleet-street, Torquay, is engaged in laying out the Audley Park Estate, Torquay, on town-planning lines, and will shortly be inviting tenders for road-making, sewering, etc.

Towcester.—The Governors have passed sketch plans for alterations to the school premises.

Tredegar.—The licensing magistrates have granted a licence for a new hotel to be erected

at Oakdale Village by the Tredegar Iron and Coal Company. Mr. A. F. Webb is the architect. The building will cost £4,000.

Ulverston.—Plans passed by R.D.C.:—Shippon, at Leece, for Mr. Edmondson; alterations to cottage at High Newton, for Messrs. Banks & Fulton, Kendal.

Upholland.—Plans for two cottages and a warehouse by Mr. R. Rowbottom at Roby Mill have been approved. Plans for eight cottages by the Surveyor have been approved by the U.D.C.

Warrington.—The B.G. have approved of the plans of Messrs. W. & Segar Owen for the erection of new offices and boardroom.

Whitby.—Plans have been passed for a factory in Stokesley-road, submitted by Messrs. R. A. Wilson & Sons, on behalf of Mr. H. Kirkley, Newcastle-on-Tyne.

Wilmslow.—Plans passed by U.D.C.:—New premises in Grove-street for the Manchester and Liverpool District Bank; bakehouse for Mr. C. Birtles in Hawthorn-walk; four cottages in Hawthorn-walk for Messrs. A. R. Hough & Son.

Windsor.—The L.G.B. have held an inquiry into the application of the T.C. to borrow £4,000 for the extension of the baths.

Wishaw.—The T.C., in looking out for suitable ground on which to erect houses for the working classes, have selected provisionally the local golf course, and have approached the superior to ascertain the terms and conditions on which 10 or 20 acres of the ground could be obtained.

Withnell.—Plans for additions to four houses in Railway-road, Brinscall, for Mr. W. Holden, approved.

Woking.—The U.D.C. are applying for a loan to acquire land on which to erect twenty-four houses.

Woodford.—The U.D.C. have decided to apply to the L.G.B. for sanction to the following loans:—£11,329, for works of surface reconstruction of main roads.

GENERAL BUILDING NEWS.

CHURCH, HENDON, N.W.

A new chancel, nave, and aisle is being built at Hendon Parish Church. The architect is Mr. Temple Moore, F.R.I.B.A., Well-walk, Hampstead, N.W.

L.C.C. SCHOOL, WHITECHAPEL.

A large elementary and blind school is in course of erection in Vallance-road, Whitechapel. The architect is Mr. W. E. Riley, F.R.I.B.A., Superintending Architect of the London County Council, and the general contractors are Messrs. J. Chessum & Sons, Southplace, E.C. Accommodation will be provided for about 1,500 elementary and forty blind scholars.

SHOWROOMS, ETC., CARNABY-STREET, W.

Showrooms, offices, etc., are in course of erection in Carnaby-street, Golden-square, adjoining the premises of the St. James's and Pall Mall Electric Light Company, Ltd. The architects are Messrs. Taperell & Haase, John-street, Adelphi, W.C., and the general contractors are Messrs. Walter Lawrence & Son, Finsbury-circus, E.C.

CHURCH MISSIONARY SOCIETY, E.C.

The premises of the Church Missionary Society, Salisbury-square, E.C., are being extended under the architectural guidance of Messrs. Seth-Smith & Munro, Lincoln's Inn-fields, W.C. The new building will be in Primrose-hill and Hanging Sword-alley, where, it will be remembered, was Blood Bowl House, the cellar of which is shown in one of Hogarth's "Industry and Idleness" series. Hanging Sword-alley was drawn upon also by Dickens in "A Tale of Two Cities" for the residence of the Cruncher. Beyond an old leaden cistern and some panelling, little of architectural interest was discovered during the demolition. The general contractors are Messrs. Holloway Brothers, Westminster Bridge, S.W.; the steelwork will be by Messrs. Drew-Bear, Perks, & Co., Ltd., Battersea; and the lifts will be by Messrs. R. Waygood & Co., Ltd., Falmouth-road, S.E. The new building will be used as offices, etc., by the staff of the Church Missionary Society.

FACTORY, KINGSLAND-ROAD, N.E.

A factory has just been completed in the Kingsland-road, N.E., for Messrs. Freshwater & Co. The architects were Messrs. Boreham, Son, & Gladding, Finsbury-pavement, E.C., and the general contractors were Messrs. W. J. Fryer & Co., Ltd., Harrow-road, W.

TRADE NEWS.

Under the direction of Mr. W. Rushworth, Architect to the Durham Education Committee, Boyle's latest patent "air-pump" ventilators have been applied to Dean Bank Schools, Co. Durham.

The Brightside Foundry and Engineering Company, Ltd., have just secured two large contracts in addition to the various works that are at present being handled by them. One is for the complete engineering plant at the Devonshire Hospital, Buxton, including steam boilers with forced draught, mechanical stokers, and coal and ashes conveyors. The other contract is for the Scarborough Board of Guardians, and this comprises a centralised system of heating and hot-water service for the whole of the workhouse and infirmary buildings, also a complete electric-lighting equipment and water-softening plant.

The Park Schools New Observation Block, Hanwell, are being supplied with Shorland's warm-air ventilating patent Manchester stoves and grates by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Messrs. John Jardine, of Deering-street, Nottingham, have just put on the market new fast and loose pulleys for general use. The loose pulleys run upon a cast-iron sleeve fixed to shaft by a grub screw. Special machinery has been laid down for manufacturing these pulleys, and Messrs. Jardine are therefore able to supply them cheaper than the ordinary machinist can produce them.

Alterations and additions are being carried out for Messrs. Tidmarsh & Sons, Wilson-street, Upper-street, Islington, N., by Messrs. E. A. Roome & Co., Crown Works, Urswick-road, Hackney, under the supervision of Messrs. Lovegrove & Papworth.

PARLIAMENTARY NOTES.

Delhi Buildings.

Mr. Bennett-Goldney asked the Under-Secretary of State for India if he would ascertain whether the architect appointed by the Government to advise with a Committee as to the planning of the new Delhi has sent in a further report; whether his suggestions would be made public and his drawings exhibited in the House; and whether the designs for the principal Government buildings would be thrown open to competition to all architects who were British subjects, or whether the architect consulted with regard to the planning of the new Delhi was to be given the chief part of the work without competition.

Mr. G. Roberts replied that the Secretary of State was not aware that any important alteration in the planning of the new Delhi was proposed, but he would make inquiries on the matter. The two selected architects had been commissioned to prepare conjointly designs for Government House and two secretariat blocks, and there would be no competition with respect to these buildings.

British Museum.

Mr. Bennett-Goldney asked, on Tuesday, in the House of Commons, when the plans and drawings for the new buildings of the British Museum were thrown open to public competition, and, if not, who it was that chose the particular architect employed.

Mr. Wedgwood Benn replied that the plans and drawings were not thrown open to public competition. The architect was selected by the Government in 1904, from a panel of six architects, nominated by the Royal Institute of British Architects.

Answering a further question, Mr. Wedgwood Benn said it was considered desirable to place the heating units in the walls of the upper main gallery; but this did not detract in any way from the usefulness of the gallery. Slight stains had appeared, but it was hoped that, when the ventilating system was in action, the cause would disappear.

Housing in Rochdale.

In the House of Commons Sir Arthur Griffith-Boscawen asked the President of the Local Government Board whether his attention had been called to the recent reports published by the Medical Officer of Health of Rochdale, in which it was stated that there were 5,462 not-through houses in Rochdale, of which 3,470 were back-to-back; whether he was aware that Manchester had got rid of over 5,000 back-to-back houses in the last six years, and Salford had reduced the number of such houses from 2,525 to 73; if he would give any reason why similar action had not been taken at Rochdale; and if the Local Government Board proposed to take any steps in the matter.

Mr. Herbert Lewis replied that the President of the Local Government Board is in communication with the Town Council on the matter.

New Railway Offices.

A Select Committee of the House of Commons has passed the preamble of the Bill of the London Electric Railway Company, which authorises that company to acquire land in the Broadway, Westminster, for the erection of new offices.

THE LATE MR. R. P. CAFFERATA.

The estate of the late Mr. Redmond Parker Cafferata, of Harrowby House, Grantham, and Newark-on-Trent, cement, plaster, and brick manufacturer, aged sixty-seven years, is of the gross value of £59,530.

PATENTS.

APPLICATIONS PUBLISHED.*

28,642 of 1912.—Carl Heinrich Schol: Manufacture of light slabs, blocks, bricks, plates, boards, and the like from blast furnace slag.

3,675 of 1913.—William Ernest Putman and John William Rawden: Apparatus for cleaning water-mains and the like.

4,286 of 1913.—Edward Charles Robert Marks (Alexander Anderson Scott): Methods and apparatus for the burning and like treatment of bricks.

4,630 of 1913.—George Henry Thomas: Fastener or holder for sliding windows.

4,679 of 1913.—Charles William Zerenner: Manufacture of fireproof composition and the production therefrom of artificial marble, slabs, blocks, or the like.

5,208 of 1913.—Horatio Nelson Barnes and E. Pollard & Co., Ltd.: Draught and dust excluding means for doors, windows, show-cases, cabinets, and the like.

6,172 of 1913.—Frederick William Jones and Alfred Clark: Screening apparatus and the like for the treatment of sewage and other purposes.

6,471 of 1913.—George Calvert: Non-slipping stair-treads and the like.

12,209 of 1913.—Henry Watts Ellis: Dust shields for corners of stairs and the like.

12,333 of 1913.—Fridolin Weber: Hinges for doors, windows, and the like.

14,749 of 1913.—Cipriano Salvatierra-Iriarte: Armoured concrete columns.

19,947 of 1913.—Carl Tuchscherer: Construction of brick and like walls.

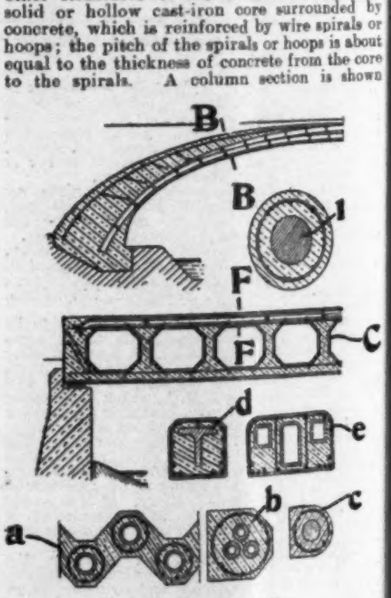
20,815 of 1913.—William Lemuel McFarland: Concrete mixers and spreaders for laying down continuous paving and the like.

22,409 of 1913.—Philipp Gelius: Method of constructing foundations or the like.

SELECTED PATENTS.

21,269 of 1912.—Dr. Fritz Edlen von Emperger: Reinforced concrete construction.

In compression members of buildings and other structures of the kind consisting of a solid or hollow cast-iron core surrounded by concrete, which is reinforced by wire spirals or hoops; the pitch of the spirals or hoops is about equal to the thickness of concrete from the core to the spirals. A column section is shown



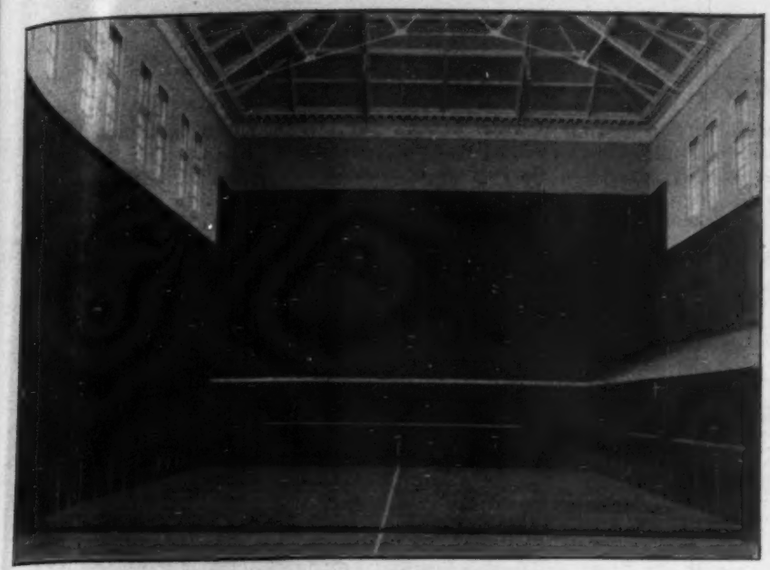
21,269 of 1912.

having a round core 1, but any shape of core may be used. In an arched bridge the distances apart of the cores vary at different sections to suit the resultant forces thereon; the section at B B may be as shown at *a*, *b*, or *c*. A two or three hinged arch may be similarly reinforced by means of half-round cast-iron tubes; *e* is a girder, the section at F F being as *d* or *e*.

THE LONDON VAN HORSE PARADE.

The London Van Horse Parade Society has issued its annual Report, which contains much valuable information about the Society. We are informed that the annual parade will take place as usual on Easter Monday, and the last day for receiving entries is on Tuesday, March 31. The offices of the Society are at 2, Upper St. Martin's-lane, W.C.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.



Tennis Court at Moreton Morrell, Warwickshire.

A MODERN TENNIS COURT.

The length of the modern tennis court is 78 ft. between the battery walls, and the width is 32 ft. The net is 5 ft. high at each end and 3 ft. in the middle. The four outer walls are about 30 ft. high, and the inner walls on three sides of the court, covered with sloping roofs, are 7 ft. 2 in. high. The courts at Queen's Club, West Kensington, are generally accepted as the model courts at the present time, but there are other good examples in London at Lord's Cricket Club and at Prince's Club. Among the best-known in the country are those at Crabbet Park, Sussex (the Hon. Neville F. Lytton); Sea Court, Hayling Island (Mr. John F. Marshall); Canford Manor, Dorsetshire (Lord Wimborne); Suffolk House, Newmarket, and Hardwick, Oxford (the late Sir C. D. Rose); Petworth House, Sussex (Lord Leconfield); Jesmond Dene, Newcastle-on-Tyne (Sir Andrew Noble); Moreton Morrell, Warwickshire (Mr. C. T. Garland); Cheveley Court, Newmarket (the late Colonel H. McCalmont); Oxford and Cambridge Universities; and the Manchester Tennis and Racquet Club.

In the building or restoration of nearly every tennis court in England, as well as in New York, Chicago, Boston, and elsewhere in America, Mr. Joseph Bickley, of Lillie-road, West Brompton, has been engaged, and to his technical experience are due many of the qualities of speed and accuracy possessed by the modern courts. His experiments with materials for floors, walls, roofs, etc., have been considerable. In order to render the walls of the necessary dark-slate blackness, manganese black is mixed with superfine Portland cement, and great care is exercised so that the surface shall not spoil the pace or ruin the balls.

To Mr. Bickley is due also many improvements in the courts for squash racquets, a form of recreation which is growing rapidly in popularity. The white Portland cement for the walls of "squash" courts is obtained in many cases through Messrs. Wm. Cubitt & Co., of Gray's Inn-road, from the Sandusky Portland Cement Company, U.S.A. These white walls are necessary owing to the practice of playing after dark with the aid of electric light. A total of 800 candle-power is given by the sixteen 50-c.p. lamps, which are fixed high out of the way overhead. Black balls are used.

OBITUARY.

Mr. C. P. Ayres.

The death of Mr. Charles P. Ayres took place at Watford on Tuesday evening from heart failure. Mr. Ayres was a well-known architect of the town and district, and designed and superintended the erection of many public buildings, including the Workhouse Infirmary, Isolation Hospital, General District Hospital and extension, Infirmary and Sanatorium of Royal Masonic Schools, Bushey (£13,000), Derby-road Grammar Schools, Watford Girls' Grammar Schools, banks and elementary schools in the town, and the offices of the Colne Valley Waterworks.

LAW REPORTS.

COURT OF APPEAL.

(Before the MASTER OF THE ROLLS and Lords Justices BUCKLEY and PHILLIMORE.)

Discovery of Mislaid Will Leads to Important Litigation:

Hewson and Another *v.* Shelley and Others.

JUDGMENT was delivered in this case on the 14th inst. upon the defendants' appeal from a judgment of Mr. Justice Astbury, the case raising a question of great public importance, and particularly to investors purchasing property from an administrator acting in pursuance of letters of administration granted upon the supposition of an intestacy, but which were subsequently revoked upon the discovery of a mislaid will made five years before the grant.

The facts were these:—The plaintiffs, the executors under the will of the late Capt. George Francis Hewson, who died in January, 1899, without issue, but leaving a widow, brought the action against the defendant, Sir John Shelley, and his mortgagees, to set aside the sale of certain freehold property known as Ovington Glebe, Southampton, which Sir John Shelley had purchased from the widow of Capt. Hewson for £3,500, she selling as administratrix of her husband's estate (of which the estate in question formed part) under letters of administration granted to the widow on June 13, 1899, it then being believed that her husband had died intestate. Of the proceeds, one-third was invested as dower for the widow and the remainder divided among the co-heiresses of the deceased. Upon the death of the widow, however, in September, 1911, her executors, in looking through her papers, discovered in an envelope between the backs and shelves of some pigeon-holes of an old writing-desk a will of Capt. Hewson, dated April 24, 1894, by which the testator left his property to his widow for life, and after her death to his cousin, whom he enjoined "to hold Ovington Glebe as an heirloom, and on no account to sell it; but should such occur," then the proceeds were to be equally divided among certain-named persons. On February 9, 1912, the letters of administration granted to the testator's widow were revoked, and probate of the will granted to the present plaintiffs, the executors of the will, who brought the action for the purpose of setting aside the sale of Ovington Glebe to Sir John Shelley. Sir John, and the mortgagees to whom Sir John had mortgaged the property after the sale, contended that the sale was *bond fide*, and took place in due course of administration, and, therefore, could not now be set aside.

Mr. Justice Astbury held upon the law that, although it was a case of extreme hardship to Sir John Shelley, the plaintiffs were entitled to succeed, and he accordingly entered judgment for them for recovery of possession of the lands in question, they undertaking to hand over the dower fund in exchange for the title deeds. He also directed that an account should be taken of the rents and profits received by the defendants since the death of the widow, and ordered the defendants to pay the costs of the action. From the decision the defendants now appealed.

The Master of the Rolls, in giving judgment, said that the appeal raised a question of great importance as to the operation of letters of administration granted by the Probate Division of the High Court, on the assumption that there was no will, to the widow of the deceased, whereas afterwards a will of her husband had been discovered, which had been admitted to probate and the letters of administration granted to the widow revoked. Mr. Justice Astbury had held that the title of the executors mentioned in the will (the plaintiffs in the action) related back to the date when the will was made, and that all matters and things done by the administratrix were void and of no effect. It was not disputed that there had been absolute good faith by all parties concerned. Having stated the facts, his Lordship said that, in his opinion, the decisions in the cases of Graysbrook *v.* Fox (decided in 1560), Abram *v.* Cunningham, and Ellis *v.* Ellis, which Mr. Justice Astbury had followed, were no longer law. He (the Master of the Rolls) held that, in the circumstances, the widow of Capt. Hewson could convey the estate to Sir John Shelley, inasmuch as the grant of the letters of administration to the widow was a judicial act, and Sir John Shelley, in the circumstances, must be held to be a *bonâ-fide* purchaser of the estate for value without notice, and, therefore, he acquired a good title to the estate as against the executors under the will. He was of opinion, therefore, that the judgment of Mr. Justice Astbury ought to be discharged and appeal allowed.

Lord Justice Buckley, in concurring, said he was of opinion, in the circumstances, that the property passed to Sir John Shelley under the letters of administration. His Lordship said that if the decision of Mr. Justice Astbury was right, nobody hereafter could safely take a conveyance from the legal personal representative of a deceased person under an intestacy.

Lord Justice Phillimore also delivered judgment to the same effect, and the appeal was accordingly allowed, with costs.

Mr. Micklem, K.C., Mr. W. M. Hunt, and Mr. Preston, instructed by Messrs. Withall & Withall, appeared for the appellants; and Mr. Jenkins, K.C., and Mr. Arnold Herbert, K.C., instructed by Messrs. Hedges & Davis, for the respondents.

KING'S BENCH DIVISION: DIVISIONAL COURT.

(Before Justices CHANNELL, SCRUTTON, and BAILHACHE.)

Question of Building Notice.

AN important decision has lately been given with reference to the necessity of giving notice of the proposed erection of new school buildings erected under the authority of the London County Council. The appeal arose under the following circumstances:—Messrs. Holliday & Greenwood, Ltd., builders and contractors, who were under contract to erect certain new schools for the London County Council, were prosecuted at the instance of the District Surveyors' Association, for having failed to give proper notice to Mr. Dicksee, a District Surveyor, in accordance with the London Building Act. The magistrate refused to accept the defence that the Education Act, 1911, exempted the builders from giving notice, and convicted, stating a case for the High Court. Mr. Danckwerts, K.C., arguing against the conviction, said that the question was whether or no the London County Council, as the education authority for London, were obliged to give a notice under sect. 145 of the London Building Act, 1894, before starting the erection of a new school. That question, said Counsel, depended not only upon the interpretation of sect. 145, but also upon that of sect. 3 of the Education Act, 1911.

This latter section, Counsel argued, exempted the London County Council or their contractors from, *inter alia*, giving any notice, provided the schools were erected in accordance with the regulations of the Board of Education.

Mr. Justice Channell raised the question as to whether the Act of 1911 took away from the District Surveyor the right to inspect the building whilst it was in course of erection. If it did so, it seemed hardly necessary to give any notice.

Mr. Danckwerts replied that the London Building Act made the right of inspection, irrespective of the notice.

Mr. Ryde, K.C., who supported the conviction, said that notice ought to have been given, because the Act of 1911 preserved a certain amount of control by the District Surveyors with reference to a variety of matters which were not dealt with by any regulations of the Board of Education.

In giving judgment, Mr. Justice Channell said that the point was one of substantial difficulty when one came to apply the words of sect. 3 of the Act of 1911 to the provisions of sect. 145 of the London Building Act. If those words were quite clear, of

LAW REPORTS—*continued on page 372.*

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xxii.; Auction Sales, xxviii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

APRIL 2. — **Ottawa.** — DEPARTMENTAL AND COURTS BUILDINGS. — The Department of Public Works, Ottawa, invite architects to submit sketch designs in a preliminary competition for above buildings. Six will be chosen from these for final competition. The five unsuccessful competitors will receive $3,000. The winner will be entrusted with the work. See particulars in issue for September 19 and advertisement in issue of September 12.

APRIL 15.—**Durham.**—INSTITUTE.—The Trustees of Sacriston Literary Institute are prepared to receive plans for the proposed new institute. Plans to be received on or before April 15. Secretary, Mr. John Walker, 11, Eliza-street, Sacriston, Durham.

MAY 1.—**Glasgow.**—SYMBOLICAL SCULPTURE.—The Glasgow Corporation invite sculptors to submit competitive models for four groups of symbolical sculpture. See advertisement in issue of March 6.

MAY 4.—**London.**—ST. PAUL'S BRIDGE.—The Bridge House Estates Committee of the Corporation of London invite designs from British architects for the architectural treatment of St. Paul's Bridge. Premiums, £300, £200, and £100 respectively. The assessor is Sir William Emerson, P.P.R.I.B.A. See advertisement in issue of December 12.

* MAY 15.—**Home Counties.**—LABOURERS' COTTAGES.—The proprietors of *Concrete and Constructional Engineering* invite designs for labourers' cottages. Premiums 100 guineas, 50 guineas, and 25 guineas respectively, and two at 10 guineas each.

JUNE 2.—**Grimsby.**—CLUB.—The Committee of the New Constitutional Club invite designs for new premises to be erected at a cost of £3,000, exclusive of fees and furnishing. Premiums of £40 (which will merge with the architect's commission), £20, and £10 respectively. Particulars of Mr. H. W. V. Skeckell, secretary, Constitutional Club, Victoria-street, Grimsby. Deposit, £2.

JUNE 20.—**Orillia.**—MONUMENT.—The Executive Committee of the Champlain Tercentenary Committee invite competitive designs for a monument to Samuel de Champlain. Not to cost more than £4,100. See advertisement in issue of February 13.

JANUARY 15, 1915.—COLLEGE MEMORIAL LECTURE HALL.—Designs for the Alexander Thompson Travelling Studentship must be delivered by the above date.

Contracts.

BUILDING, PAINTING, etc.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 23. — **Blackburn.** — ALTERATIONS.—For alterations to office premises for the Blackburn Philanthropic Assurance Company, situate in King-street, Blackburn. Names to Mr. Joseph Smith, architect, 24, Richmond-terrace, Blackburn. Deposit, £2 2s.

MARCH 23.—**Brighton.**—GRANITE.—Supply to Corporation of 1,700 tons of broken granite of various sizes. Form of tender of the Borough Surveyor, Town Hall, Brighton.

MARCH 23.—**Carlisle.**—ROOF.—For roof over woodyard at Fusehill Workhouse for the Carlisle B.G. Particulars of Mr. G. Armstrong, architect, 24, George-street, Carlisle.

MARCH 23.—**Darton.**—HOUSES.—Erection of two houses, Church Field-lane, Darton. Quantities of Messrs. R. & W. Dixon, architects, 5, Eastgate, Barnsley.

MARCH 23. — **Dundee.** — STORES. — Supply to Dundee Water Commissioners of sluice valves, fire hydrants, special castings, main service cocks, ironmongery goods, and sundries. Forms of tender of Mr. George Baxter, Engineer and Manager, Water Engineer's Office, 93, Commercial-street, Dundee.

MARCH 23. — **Finchley.** — DEMOLITION. — For demolition of Brook Farm buildings for the U.D.C. Particulars of Mr. C. J. Jenkins, Engineer, Council Offices, Finchley, N.

MARCH 23.—**Huddersfield.**—ALTERATIONS.—For alterations and additions to offices at P.F. & Industrial Society's premises, Bradford-road, Messrs. J. H. Hall & Son, architects, Exchange, Huddersfield.

MARCH 23.—**Leek.**—MATERIALS.—Supply to Leek U.D.C. of road materials, sewer pipes, etc. Form of tender of Mr. W. E. Beecham, C.E., Surveyor and Water Engineer, Town Hall, Leek.

MARCH 23. — **Lemington-on-Tyne.**—PAINTING. —Renovating the Primitive Methodist Church. Specifications of Mr. R. Wigham, secretary, Percy House, Lemington-on-Tyne.

MARCH 23.—**Pontypridd.**—STORES.—Supply to Pontypridd and Rhondda Joint Water Board of cast-iron pipes and specials, stop cocks, fire hydrants, and general stores. Quantities of the Water Works Engineer, 27, Gelliwastad-road, Pontypridd.

MARCH 23.—**St. Marylebone.**—WOOD BLOCKS. Supply of about 1,400,000 creosoted wood blocks for paving for the B.C. Particulars of Mr. J. Paget Waddington, C.E., Borough Surveyor, Town Hall, Marylebone-lane, Oxford-street, W.

MARCH 23.—**Squirrel's Heath.**—EXTENSIONS.—Extensions to All Saints' Church, Squirrel's Heath. Names to the architect, Mr. S. Phillips Dales, Lindum-chambers, Romford.

MARCH 23.—**Stalybridge.**—DRAINAGE TILES.—Supply to the Stalybridge and Dukinfield Joint Sewerage Board of drainage tiles for circular filters. Particulars from the Manager, Mr. H. W. Stafford, at the Works, Bradley Hurst, Dukinfield.

MARCH 23.—**Stockport.**—STORES.—Supply to the Gas Department of the Corporation of stores. Forms of tender of the Gas Engineer, Portwood Gas Works, Stockport.

MARCH 24. — **Barnsley.** — CLUB.—Erection of working-men's club and institute at Platts Common. Mr. W. Allen, architect, Hoyland, near Barnsley.

MARCH 24. — **Bettws-y-Coed.**—HOUSE.—Erection of detached house for the Gwydyr Estate. Specification at the Temperance Cottage, Bettws-y-Coed, Mr. T. Griffith, land agent, Gwydyr Ichs', Llanrwst.

MARCH 24. — **Bettws-y-Coed.** — MINISTER'S HOUSE.—Erection of minister's house for the C.M. Trustees at Bettws-y-Coed. Specifications of Mr. T. Griffith, Gwydyr Icha', Llanrwst.

MARCH 24.—**Cambridge.**—INFIRMARY BUILDING. —Erection of a building for the accommodation of the nurses at the Workhouse Infirmary, Mill-road, Cambridge, in accordance with specifications prepared by Mr. Sidney French, architect. Quantities of Mr. John Congreve, Clerk to the Guardians, 55, St. Andrew's-street, Cambridge.

MARCH 24.—**Glasgow.**—TRAMWAY DEPÔT.—New tramway depôt proposed to be erected at Govan for the Corporation. Specifications of Mr. James Dalrymple, General Manager, 46, Bath-street. Deposit, £1 1s.

MARCH 24.—**Gosforth.**—HOUSE.—Erection of a residence for the Superintendent of the Fire Brigade at the rear of the Council Offices, High-street. Particulars from the Engineer and Surveyor, Mr. Geo. Nelson, A.M.Inst.C.E., Council Offices, Gosforth.

MARCH 24.—**Llansamlet.**—TOWER.—Erection of tower to the Parish Church of Llansamlet for the Rev. J. Martin Griffiths and the Building Committee. Names to Mr. Glendinning Moxham, F.R.I.B.A., architect, 18, Castle-street, Swansea. Deposit, £2 2s.

MARCH 25. — **Leeds.** — MATERIALS.—Supply to Corporation of gravestones, flags, grassboards, planks, etc. Schedules of Mr. W. T. Lancashire, City Engineer, Municipal Buildings.

MARCH 25. — **Liverpool.**—FIREPLACES.—Alterations to sixteen existing fireplaces at the Surgical Block of the Brownlow-hill Institution and the supply of sixteen new grates. Mr. Gaius W. Coster, Clerk, Parish Offices, Brownlow-hill, Liverpool.

MARCH 25.—**Manchester.**—EXTENSION.—Extension to the nurses' quarters at Monsall Hospital for the Corporation. Quantities of the City Architect, Town Hall. Deposit, £1 1s.

MARCH 25. — **Manchester.**—PAVILIONS.—Erection of four ward pavilions and isolation block at Monsall Hospital for the Corporation. Quantities of the City Architect, Town Hall, Manchester. Deposit, £2 2s.

MARCH 25.—**Northampton.**—SCHOOL.—Erection of a new public elementary school in the parish of Newnham for the Northamptonshire C.C. Applications to the architects, Messrs. Blackwell & Riddey, 53, High-street, Kettering.

MARCH 25.—**St. Annes-on-the-Sea.**—MATERIALS. —For supply to St. Annes-on-the-Sea U.D.C. of road materials, Portland cement, sewerage ironwork, ironmongery, paints and brushes, etc. Forms of tender from the Council's Surveyor, Council Offices, St. Annes-on-the-Sea.

MARCH 26.—**Chorley.**—FURNITURE.—Furnishing of the new Council Chamber and Offices in High-street, Chorley, for the R.D.C. Particulars of Mr. R. E. Aspden, Clerk to the Council, Union Offices, High-street, Chorley.

MARCH 26.—**East Grinstead.**—ROAD MATERIALS. —Supply to the East Grinstead U.D.C. of granite, granite screenings, tarred macadam, hand-picked surface flints (broken), Kentish rag stone, and brick rubble; also for steam rolling for the year ending March 31, 1915. Forms of tender from Mr. W. E. Woollam, Engineer, Council Offices, London-road, East Grinstead.

MARCH 26.—**Romford.**—GRANITE.—Supply to Romford U.D.C. of 1,150 tons of best blue Guernsey granite and 240 tons of best blue Guernsey granite chippings. Forms of tender of Mr. H. T. Ridge, Acting Surveyor, Council Offices, Romford.

MARCH 26. — **Stythians.** — ALTERATIONS, ETC. — The Trustees of the United Methodist Free Church, Stythians, invite tenders for reseating a portion of the above building, also for certain alterations and repairs. Specification of Mr. Sampson Hill, architect, Green-lane, Redruth.

MARCH 26. — **Uxbridge.** — ROAD MATERIALS. — Supply to Uxbridge R.D.C. of broken granite, granite chippings, tarred granite, limestone, and slag, washed shingle, or gravel, and gravel and hoggin. Forms of tender from the Engineer to the Council, Mr. John Wm. Harrison, Corn Exchange, Uxbridge.

MARCH 27.—**Spalding.**—HOUSES.—Erection of eighteen cottages and outbuildings in the parish of Pinchbeck for the Spalding R.D.C. Quantities of Messrs. Davis & Crowley, architects, 6, Double-street, Spalding, or 2, York-row, Wisbech.

MARCH 28.—**Abertillery.**—STORES.—Supply to Abertillery U.D.C. of building materials, drain pipes, road metal, etc. Specifications from Mr. L. J. Langford, Gas Works Engineer, Gas Works, Abertillery.

MARCH 28.—**Halifax.**—EXTENSION.—Extension to machine works, Lister-lane, Halifax, for the Corporation. Specification of Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit, £1.

MARCH 28.—**Halifax.**—GREENHOUSES.—Erection of two greenhouses at West House for the Corporation. Specification of Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit, £1.

MARCH 28.—**Halifax.**—SLATING.—Reslating of portions of the roof of the borough markets for the Corporation. Specification of Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit, £1.

MARCH 28. — **Halifax.** — WHITEWASHING.—For whitewashing the slaughter-houses for the Corporation. Specification of Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit, £1.

MARCH 28. — **Hindley.** — ELECTRICITY STATION. — Erection of an electricity transforming station and other buildings adjoining on land in Cross-street, Hindley, for the U.D.C. of Hindley. Particulars from Mr. Oswald P. Abbott, Surveyor. Deposit, £2 2s.

MARCH 28. — **Maidstone.** — MATERIALS. — Supply to the Kent C.C. of road tools, grease, oil, etc. Forms of tender of the County Surveyor, St. Peter-street, Maidstone.

MARCH 28.—**Shrewsbury.**—MATERIALS.—Supply to Corporation of broken macadam, tarred granite macadam, tar spraying, distilled tar, granite crossing blocks, York-shire or Lancashire kerbs, flags, and channels, concrete flags. Form of tender of Mr. A. W. Ward, A.M.Inst.C.E., Borough Surveyor, Shrewsbury.

MARCH 28.—**Stafford.**—PAINTING.—Painting the interior and exterior of the Isolation Hospital Buildings, Tithe Barn-road, Stafford, for the Corporation. Specification of Mr. W. Plant, A.M.Inst.C.E., Borough Engineer and Surveyor, Borough Hall, Stafford.

MARCH 28.—**Waterlee.**—MATERIALS.—Supply to the U.D.C. of Waterlee-with-Seaforth of road materials, Portland cement, pitch and tar, lamp columns, sewer ventilators, gullies, etc. Specifications from Mr. F. Spencer Yates, A.M.Inst.C.E., the Surveyor to the Council, Town Hall, Waterlee.

[Those with an asterisk (*) are advertised in this issue.]

BUILDING, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the name of those willing to submit tenders, may be sent in.

MARCH 30.—**Doncaster.**—DECORATING.—For prevention of St. Andrew's Church, Doncaster. Particulars from Mr. G. W. Swaby, 3, Charles-street, Doncaster.

* MARCH 30.—**Kent.**—ROAD MATERIALS.—The Thanet Estate, Ltd., invite tenders for supply of various road materials.

MARCH 30.—**Liverpool.**—RECONSTRUCTION.—Reconstruction to provide a Roman Catholic Chapel at the Brownlow-hill Institution for the Select Vestry. Specifications of Mr. Gaius W. Coster, Civil Parish Offices, Brownlow-hill, Liverpool.

MARCH 30.—**Wath-upon-Dearne.**—PAVING MATERIALS.—Supply to U.D.C. of macadam, tar macadam, kerbs, flags, and setts. Form of tender from Mr. J. H. Drew, Engineer and Surveyor, Town Hall, Wath-upon-Dearne.

* MARCH 31.—**Bishop's Stortford.**—SUNDAY SCHOOL.—Builders desirous of tendering are invited to send in their names by the above-mentioned date.

MARCH 31.—**Carnarvonshire.**—REPAIRS, ETC.—For repair and minor improvements, including painting, at the following schools:—Penmorfa, Moel Bychan, Maenan, Abersoch, Chwilog, Hen Llithfaen, Pentreucha, Rhydyclaidy, Capel Curig, Dwygyfylchi, Llaniestyn, Nantperis, Rhiw, Trefriw, Carneddi, Golan, Llanwnda, Penmaenan, and Craigydon, for the Carnarvonshire C.C. Mr. Evan R. Davies, Secretary of Education, County Education Offices, Carnarvon.

MARCH 31.—**Maldon.**—ROAD MATERIALS.—Supply to the Maldon R.D.C. of broken granite, basalt, slag, flints, gravel, and picked stone. Forms of tender of Mr. Edgar J. Ennals, Surveyor, 6, Market-hill, Maldon, Essex.

MARCH 31.—**Northampton.**—PAINTING.—The directors of the London & North Western Railway Company invite tenders for cleaning and painting (labour only) the station buildings, goods sheds, approach fences, etc., at the following stations:—Market Harborough, Hallaton, Tilton, Great Dalby, Medbourne, East Norton, John O'Gaunt, Melton Mowbray. Quantities at the Divisional Engineer's Office, Castle Station, Northampton.

MARCH 31.—**Porthcawl.**—COTTAGES.—Erection of a pair of cottages at Newton Nottage, Porthcawl, for the Glamorgan C.C. Specification, etc., at the Police-station, Porthcawl, and at the Glamorgan County Hall, Cardiff.

MARCH 31.—**Waterloo.**—ALTERATIONS.—For alterations and additions to fire-station for the U.D.C. Quantities of Mr. F. S. Yates, Surveyor, Town Hall, Waterloo.

* APRIL 1.—**Camberwell.**—PAINTING.—The Camberwell Guardians invite tenders for external painting at the workhouse.

APRIL 1.—**Clacton.**—BATHING CHALET.—Construction of a bathing chalet in the East Cliff, Clacton-on-Sea, for the Clacton U.D.C. Specification of Mr. Daniel Jackson Bowe, Surveyor to the Council, Town Hall Buildings, Clacton-on-Sea.

* APRIL 2.—**Hornsey-road.**—PAINTING.—The Guardians of St. Mary, Islington, invite tenders for painting work at the school in Hornsey-road.

* APRIL 3.—**Kent.**—NEW OFFICES, ETC.—The Kent E.C. invite tenders for the erection of new offices, etc., at the Westwell School.

* APRIL 3.—**Lydd.**—NEW CLOAKROOM.—The Kent E.C. invite tenders for a new cloakroom.

APRIL 4.—**Huddersfield.**—FILTER HOUSE, ETC.—Construction of a filter house, reinforced concrete tanks, etc., on the north side of Blackmoorfoot Reservoir, South Crosland, near Huddersfield, for the Corporation. Quantities at the offices of the Water Works Engineer, Town Hall, Huddersfield.

APRIL 4.—**Northumberland.**—BRIDGES.—For the building, reconstruction, or widening of the following bridges:—Deddo, near Cornhill-on-Tweed; Ellingham; Haggerston South, near Bal; Hazelrig Ford, near Belford; Mousen, near Belford; Newlands, near Belford; Newton-on-the-Moor; Nunwick; Shining Pool, near Belsay; Whitelee. Quantities of Mr. J. A. Bean, County Surveyor, The Moothall, Newcastle-on-Tyne.

APRIL 6.—**Braintree.**—BRIDGE.—Construction of a new brick bridge over the river Blackwater at Bocking for the Braintree R.D.C. Quantities from the engineers, Messrs. Sands & Walker, Milton-chambers, Nottingham. Deposit, £2 2s.

APRIL 6.—**Wallasey.**—STORES.—Various stores for the Ferries Department of the Wallasey Corporation. Forms of tender from the General Manager, Seacombe Ferry, Cheshire.

APRIL 9.—**Normanton.**—HOUSES.—Erection of seventy-six houses for the working classes on a site near Church-lane, Normanton, for the Normanton U.D.C. Quantities of Mr. Arthur Bierley, Architect and Surveyor, Council Offices, Normanton.

APRIL 11.—**Crathie.**—BRIDGE, ETC.—For construction of concrete abutments, wells, etc., in connection with proposed new bridge over the Dee at Crathie for the Inverness C.C. Mr. A. M. Grant, District Road Surveyor, County Buildings, Kingussie.

APRIL 14.—**Edmonton.**—CONVENIENCE.—Erection of sanitary convenience near Lower Edmonton Railway Station for the U.D.C. Specification of Mr. C. Brown, Surveyor, Town Hall, Edmonton.

APRIL 18.—**Nantwich.**—FARM BUILDINGS, ETC.—Additions and repairs to existing dwelling-houses and farm buildings at Ridley Hall, Ridley Farm, Cheshire; and erection of two single dwelling-houses and two sets of farm buildings at Woolstanwood Estate. Quantities at the Estate Office, 10, Wellington-road, Nantwich. Deposit, £1.

* APRIL 20.—**Canning Town.**—ALTERATIONS AND ADDITIONS.—The West Ham E.C. invite tenders for alterations and additions to a school.

NO DATE.—**Birstall.**—CHIMNEY.—Erection of brick chimney to 80 ft. high. Specification of the Howden Clough Collieries, Ltd., Birstall, near Leeds.

NO DATE.—**Chard.**—COTTAGES.—Erection of ten cottages for the Chard Industrial and Provident Society, Ltd. Quantities of Mr. T. Dolling, secretary, Chard.

NO DATE.—**Copley.**—REBUILDING.—Rebuilding the "Volunteer Arms," Copley. Quantities of Messrs. Jackson & Fox, architects, Rawson-street, Halifax.

* NO DATE.—**Crewe.**—NEW BAKERY.—The Crewe Co-operative Friendly Society, Ltd., invite tenders for erection of a new bakery.

NO DATE.—**Darfield.**—HOUSES.—Erection of two houses at Millhouses, Darfield. Specification of Mr. J. T. Gartery 9, Church-street, Darfield.

NO DATE.—**Dewsbury.**—PAINTING.—For the cleaning, painting, and decorating of Salem United Methodist Chapel. Specifications, etc., of Mr. F. Gutteridge, Rydal Mount, Dewsbury.

NO DATE.—**Needham Market.**—COTTAGES.—Erection of three pairs of workmen's cottages at Needham Market for the Bosmere and Claydon B.G. Names to Mr. Harold R. Hooper, A.R.I.B.A., architect, Ipswich.

NO DATE.—**Torquay.**—HOUSE.—Detached residence for Mrs. Thompson-Andersey, Building Estate, Torquay. Mr. F. G. Moore, M.Inst.M.E., B.Sc., architect and surveyor, Torquay.

ENGINEERING, IRON, AND STEEL.

MARCH 23.—**Coventry.**—PIPES, ETC.—Supply of the necessary 18, 12, and 9 in. diameter cast-iron pipes, including bends, junction pipes, sluice valves, etc., required in the construction of the works to be undertaken in the extension of the Baginton Sewage Farm for the Coventry Corporation. Quantities of Mr. J. E. Swindlehurst, M.Inst.C.E., City Engineer and Surveyor, St. Mary's Hall, Coventry. Deposit, £1 1s.

MARCH 23.—**Dundee.**—STORAGE HOPPERS.—Supply and erection of coke storage hoppers at Dundee Gas Work for the Dundee Gas Commissioners. Specification of Mr. Alex. Yuill, Engineer and Manager, Gas Works, Dundee.

MARCH 23.—**Uttoxeter.**—HEATING.—Provision of heating and ventilating apparatus and other improvements at the Town Hall for the U.D.C. Specifications at the Surveyor's Office, Town Hall, Uttoxeter.

MARCH 24.—**Birmingham.**—FITTINGS, ETC.—W.I. steam, gas, and water piping and fittings, sizes ¼-in. to 4-in., for Cadbury Bros., Ltd. Tenders to Cadbury Bros., Ltd., Buying Department, Bournville, Birmingham.

MARCH 24.—**London.**—LOCOMOTIVES.—Three locomotives, with side tank engines, to the Board's Works at Hampton-on-Thames for the Metropolitan Water Board. Specification from the Clerk of the Board, Savoy-court, Strand, W.C.

MARCH 24.—**Watford.**—LAUNDRY MACHINERY.—Additions to plant and alterations to existing plant at Workhouse Laundry. Particulars of Mr. F. Wilson, Clerk, Watford-place, Watford.

MARCH 25.—**Egremont.**—PIPES.—About thirty tons of 6-in. and eight and a half tons of 4-in cast-iron spigot and socket pipes, specials, and valves, for the Egremont U.D.C. Quantities from Mr. James Cowan, Engineer, Town Hall, Egremont, Cumberland.

MARCH 28.—**Edinburgh.**—ELECTRICAL STORES.—Supply to Corporation of arc lamp globes, cast-iron pavement boxes, underground conduits for electricity cables. Specifications at the Engineer's Office, Dewar-place, Edinburgh. Deposit, 10s. for each specification.

MARCH 31.—**Warrington.**—ELECTRICITY WORKS.—For (1) 750 k.w. rotary converter; (2) E.H.T. switchboard panel; (3) construction of sump and laying of pipes; (4) turbo-alternator foundations, for the Corporation. Specifications of Mr. F. V. L. Mathias, M.I.E.E., Borough Electrical and Tramways Engineer, Howley, Warrington. Deposit, £1 each specification.

NO DATE.—**Basford.**—GAS FITTINGS.—Taking down of old gas fittings at the Workhouse Hospital, and providing and fixing new fittings, for the B.G. Applications to the architect, Mr. W. V. Betts, 630, Radford-road, Old Basford.

ROAD, SANITARY, AND WATER WORKS.

MARCH 21.—**Northallerton.**—ROADS.—Strengthening and resurfacing York and Northallerton main road near Easingwold. Quantities at the County Surveyor's Office, County Hill, Northallerton.

MARCH 23.—**Southampton.**—ASPHALT PAVING.—For laying asphalt paving in Upper Canal-walk for the Corporation. Specification at the Borough Engineer's Office, Municipal Offices, Southampton. Deposit, £1 1s.

MARCH 23.—**Whitley.**—ROADS, ETC.—(*a*) Widening of Bygate-road; (*b*) improvements east side of Beverley-road; construction of sewer and new road on the Beverley Estate, for the U.D.C. Quantities of Mr. A. J. Rousell, A.M.Inst.C.E., Surveyor to the Council, Council Offices, Whitley Bay.

MARCH 24.—**Barking.**—STREET WORKS.—Execution of private street works at Perth, Keith, and Oban roads for the U.D.C. Quantities from Mr. C. F. Dawson, Surveyor, Public Offices, Barking.

MARCH 24.—**Islington.**—WOOD PAVING.—Paving with wood blocks and granite setts the carriageway of macadamised portion of the carriageway of Highbury Park, and making a concrete foundation for part of the carriageway of Blackstock-road for the Islington B.C. Quantities of the Borough Engineer, Mr. J. Patten Barber, Town Hall, Upper-street, N. Deposit, £2 2s.

MARCH 24.—**Islington.**—PAVING.—Paving with asphalt, on a concrete foundation already prepared, a part of the carriageway of Blackstock-road for the Metropolitan Borough of Islington. Quantities of the Borough Engineer, Mr. J. Patten Barber, Town Hall, Upper-street, N. Deposit, £2 2s.

MARCH 25.—**Hoddesdon.**—SEWERS.—For (*a*) the construction of about 550 yds. of stoneware pipe surface water drain, etc., and (*b*) the construction of a 12-in. relief sewer about 220 yds. in length, with the necessary junctions and manholes. Quantities of Mr. W. H. Flood, Surveyor to the Council, High-street, Hoddesdon. Deposit, 10s. 6d.

MARCH 25.—**Leamington.**—PAVING.—For providing and laying about 1,600 yds. of concrete slab pavement on the west side of the Parade for the Corporation. Specification at the Office of the Borough Engineer, at the Town Hall.

MARCH 26.—**Egremont.**—PIPES.—For cutting and filing off about 2,700 yds. of pipe branches for the U.D.C. Quantities of Mr. J. Cowan, Engineer, Town Hall, Egremont.

MARCH 27.—**Clutton.**—ROAD WORKS.—(*a*) Rebuilding a culvert near Chew Park, Bishop Sutton; (*b*) resetting about 200 ft. run of kerb and providing and laying 200 ft. run of 15-in. penant channel course at Bishop Sutton; (*c*) providing and laying 174 ft. run of pennant kerb at Pensford for the Clutton R.D.C. Specifications of Mr. T. Orchard, The Grange, Hallatrow. Deposit, 10s.

MARCH 28.—**East Grinstead.**—SEWERING.—For sewering Park-road for the East Grinstead U.D.C. Specifications from Mr. W. E. Woollam, Engineer to the Council.

MARCH 28.—**Machynlleth.**—ROADS.—Construction of roads and sewers at Machynlleth Garden Village. Quantities of the Secretary, the Welsh Town Planning and Housing Trust, Ltd., 21, Park-place, Cardiff. Deposit, £1 1s.

MARCH 28.—**Settle.**—WATER WORKS.—For carving out Langcliffe water supply for the Settle R.D.C. Quantities of the Council's Engineer and Surveyor, Mr. T. A. Foxcroft, Town Hall, Settle.

MARCH 30.—**Wandsworth.**—STREET WORKS.—The making up and paving of Hambledon-road, Southfield, for the B.C. Specification, etc., of the Borough Engineer, Mr. P. Dodd, M.Inst.C.E., 56, East-hill, Wandsworth, S.W. Deposit £5 5s.

MARCH 31.—**Lewisham.**—WOOD PAVING.—Supplying materials and executing the necessary works (in five contracts) in laying wood paving in various parts of the borough. Specification, etc., at the Town Hall, Catford (Surveyor's Department).

MARCH 31.—**Listowel.**—WATER.—Pumping water to reservoir overlooking town. Continuous supply day and night to township of not less than 100,000 gallons per twenty-four hours. Mrs. A. Gleeson, Clerk to Listowel U.D.C.

* MARCH 31.—**Swansea.**—ROADS AND SEWERS.—The Swansea Corporation invite tenders for about 2,350 lin. yds. of roads, sewers, etc.

MARCH 31.—**West Hartlepool.**—FOOTPATH.—Construction of Westbourne-road footpath for the Corporation. Quantities of Mr. N. F. Dennis, Borough Engineer, West Hartlepool.

APRIL 2.—**Camborne.**—SEWERAGE.—Providing and laying of about eleven miles of stoneware sewers and the construction of manholes and other works, the construction of about 1,000 yds. of tunnel, the provison and laying of a 24-in. by 16-in. egg-shaped sewer, and the provision and laying of about 175 yds. of 18-in. cast-iron outfall sewer for the U.D.C. Quantities from the Engineer, Mr. John Chadwick, Bletchley, Bucks. Deposit, £3 3s.

APRIL 2.—**Sale.**—STREET WORKS.—For making up John-street for the U.D.C. Quantities of Mr. W. Holt, A.M.Inst.C.E., Engineer and Surveyor, Council Offices, Sale.

APRIL 3.—**Chippenham.**—SEWER.—Construction of about 670 yds. of 6-in. sewer for the R.D.C. Quantities at the office of the Clerk, 4, St. Mary-street, Chippenham.

APRIL 4.—**Wardley.**—CULVERT, ETC.—Construction of a culvert over the brook between the parishes of Wardley and Belton, on the main road from Uppingham to Leicester, for the straightening the approaches thereto, for the Rutland C.C. Quantities of Mr. James Richardson, County Surveyor, 13, Barn-hill, Stamford.

* APRIL 6.—**Hendon.**—ROAD-MAKING.—The Hendon U.D.C. invite tenders for road-making.

* APRIL 6.—**Kent.**—DRAINAGE.—The Bromley Guardians invite tenders for drainage work at the Workhouse.

APRIL 6.—**Lanark.**—SEWERS.—The District Committee of the Middle Ward of the County of Lanark invite tenders for the construction of about 1,600 yds of outfall and intercepting sewers, from 9 in. to 24 in in diameter, and also sewage tanks and access road at Daldowie, and relative works. Schedule of measurement at the office of Mr. W. L. Douglass, M.Inst.C.E., District Engineer, District Offices, Hamilton. Deposit, £1.

APRIL 6.—**Witney.**—WATER WORKS.—For (1) the construction of a concrete lining to a dug well 82 ft. deep; (2) laying of about 1,800 yds. of 3-in. service mains; (3) the supply and fixing of a vertical oil engine, three-throw pump, two air compressors, air-lift plant, etc., for the Witney R.D.C. Particulars from the Council's Consulting Engineer, Mr. H. Howard Humphreys, of 28, Victoria-street, Westminster, S.W. Deposit, £2 2s.

APRIL 7.—**Caerphilly.**—ROADS.—Widening and improving the Aber and Mill road from Caerphilly to Penyrheol, including the construction of a masonry and steelwork bridge and other contingent works for the U.D.C. Quantities of Mr. Alfred O. Harpur, Engineer and Surveyor, Council Offices, Caerphilly. Deposit, £2 2s.

[Those with an asterisk (*) are advertised in this issue.]

ROADS, etc.—*continued*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

* APRIL 7.—**Preston.**—SEWAGE DISPOSAL WORKS.—The Whalley Asylum Committee invite tenders for construction of sewage disposal works.

APRIL 9.—**Dunfermline.**—SEWER.—Construction of nearly two miles of the main outfall sewer, chiefly in tunnel, and relative work for the T.C. Quantities, etc., of the Engineers, Messrs. Crouch, Hogg, & Easton, C.E., 14, Blythswood-square, Glasgow. Deposit, £3 3s.

Public Appointments.

* MARCH 25.—CLERK OF WORKS.—The Derbyshire and Staffs C.C. invite applications for the above post. Salary, £3 3s. per week.

* APRIL 21.—SURVEYING ASSISTANTS.—The Shanghai Municipal Council invite applications for the above post. Salary, about £385 per annum.

* NO DATE.—ASSISTANT ENGINEERS.—The Public Works Department of Ceylon invite applications for the above posts. Salary, £300 per annum and travelling allowance.

Auction Sales.

* MARCH 23.—**New Wandsworth.**—Messrs. Chandler & Sons will sell by auction, on the premises, woodworking machinery, etc.

* MARCH 25.—Messrs. Churchill & Sim will sell by auction, at the Great Hall, Winchester House, Old Broad-street, E.C., an assortment of deals, battens, boards, timbers, etc.

* APRIL 2.—**Pimlico.**—Mr. H. W. Smith will sell by auction, on the premises, the stock and plant of a builder and contractor.

* APRIL 7.—**Blackfriars.**—Messrs. E. Evans & Sons will sell by auction, at the Mart, a block of freehold property.

[Those with an asterisk (*) are advertised in this issue.]

LAW REPORTS—*continued from page 369.*

course, the policy of the Act would be an irrelevant consideration, but if they were not, then the Court had to try and find what was the true meaning. In his opinion, sect. 145 of the London Building Act was a provision dealing with the construction of new buildings, and the notice required by that provision was dispensed with by the Act of 1911 in the same way as notices under the Public Health Acts were dispensed with in other parts of the country. He was guided in coming to that decision by the fact that he could find no reason for holding that there was a difference in the law in places, such as London, governed by local building Acts, and those governed by the Public Health Acts.

Justices Scrutton and Bailhache agreed, and the appeal was allowed and the conviction quashed.

Architect's Fees: £5 5s. a Day Allowed.

IN the Shoreditch County Court on March 12 his Honour Judge Smyly, K.C., gave a considered judgment in an action remitted from the High Court, in which Mr. Herbert Harry Gissing, of 14, West-side, Clapham Common, an architect and surveyor, sued Messrs. Lipton, Ltd., of 196, City-road, E.C., to recover £96 7s., balance alleged to be due for work done as a surveyor.

Mr. A. E. Woodgate, barrister, appeared on behalf of the plaintiff, and Mr. Craig Henderson was counsel for the defence.

It appeared that for eleven years the plaintiff was employed in the architect's department of the defendants. Then a number of shops were opened in Manchester, and contracts for the building were made with Messrs. T. Hardwick & Co., the shopfitters, of Manchester, amounting in all to some £5,000. The plaintiff had a good deal to do with arranging the contracts and preparing the specifications. In 1908 he left the defendants' employ to go into business for himself, at which time there was a sum of £1,500, claimed as a balance by Messrs. Hardwick. As this was not settled Messrs. Hardwick entered an action in 1909, and then Mr. Cansfield, the general manager to the defendants, asked the plaintiff if he would go to Manchester and see what he could do toward an arrangement. It was agreed he was to have a fee of £30 and 10 per cent. on whatever amount he managed to get knocked off, besides expenses. He arranged that the price should be reduced to £1,300, and came to London with the idea that the matter was finally settled. This price was, however, refused by Messrs. Lipton, and again Mr. Cansfield asked him to go to Manchester, this time to make a survey of the whole of the £5,000 worth of work. Plaintiff said his charge for day work was usually 8s. an hour, 10s. an hour overtime, and 16s. an hour for Sunday work. For the work he did at Manchester he charged at £7 10s. a day, which included his hotel bill, and that he considered very reasonable indeed. All the other work he had done he had charged at the rates mentioned. It was quite true that he had done work for Messrs. Hardwick direct to the amount of about £50, and that there is an action pending even now as to about £20; but none of that work was done in the time that he was specially working for Liptons. It was a question as to who had given the orders, and he gave the information.

Mr. Wonnecott, an architect and surveyor, of 10, Old Cavendish-street, W., said he considered £7 10s. a day quite reasonable. £3 3s. was quite a minimum fee, and £7 10s. was by no means the maximum. He had never heard of £4 4s. being the standard charge. As to £50 being enough for the whole of the work done, he thought such a suggestion absurd.

Mr. George Spencer, of 79, Gresham-street, E.C., a quantity surveyor, said he believed the whole of the bill of the plaintiff was somewhere near the correct recognised figure, 2½ per cent. on £5,000, £125. So far as he knew, the plaintiff did the measuring.

For the defence, Mr. Moore Smith, F.R.I.B.A., Surveyor to the West Ham Justices, said £3 3s. was an ample figure to charge for the work done, with £1 1s. a day hotel bill. From what he saw of the statements produced, the plaintiff had got it out in block quantities, as it was called, with no scheduled details, and for such work a day of eight hours a shop was quite sufficient, say about six days in all; that was taking one shop with the other. He thought £52, which the plaintiff had already received, he understood, was ample recompense. In cross-examination he said he should charge time for travelling, which would be all according to the pocket of the client; in the case of Liptons he should charge 10s. an hour. There was a lot of the work done by the plaintiff which he should not have done at all, but would have employed an assistant. His charge would, of course, be higher if he worked thirteen or fourteen hours a day, as the plaintiff suggested he had done.

Mr. Henderson said Messrs. Lipton had no desire to get out of paying what was just and right in such a case, but they were of opinion that the charges were much inflated, and that the amount already paid amply recompensed the plaintiff.

Judge Smyly, in giving his considered judgment, said he saw that two interviews had been charged at £1 12s., and he assumed those to be accurate, and had allowed for others on the same basis. As to the four days in Manchester, a F.R.I.B.A. had said that £4 4s. was an ample charge, which included £1 1s. for hotel expenses. He thought that might be right for normal days, but the plaintiff said he had to work abnormal hours, so he had allowed him £5 5s. a day. As to the number of hours he was engaged in making up the report in London, he (his Honour) has found the greatest difficulty, as the plaintiff's diary, kept by his assistant, told him nothing. He had to make a guesswork shot of it. He had to bear in mind that a vast amount of the work that he went to inspect was work done when the plaintiff was in the defendants' employ, and had the superintending of it, which must have made his work easier. Also the four days in Manchester must have been of great assistance, as it gave him more than half a day at each of the shops to measure up. Plaintiff had charged 173 hours for himself and 187 hours for his assistant, but his Honour could not see how that could have been utilised. He had treated it on the basis of a day and a half, twelve hours for each shop. With incidentals, therefore, he made the total £72 3s. 6d., of which the plaintiff had had £52 2s. His verdict would be for the plaintiff for the balance, £17 1s. 6d.

Costs were applied for, but his Honour said there could be no costs, as the amount recovered was under £20.

90-93, FENCHURCH-STREET, E.C.

The old buildings on this site, including the remains of the "Saracen's Head Inn" (see p. 298), were numbered 4-7, Aldgate, but the new buildings in course of erection will be taken into Fenchurch-street. The architect is Mr. L. Sylvester Sullivan, A.R.I.B.A., Fenchurch-street, E.C., and the general contractors are Messrs. Ashby & Horner, Aldgate. The quantity surveyors are Messrs. D. Campbell & Son, Finsbury-circus. The following subcontractors will be engaged:—Steelwork, the Aston Construction Company, Eagle Wharf-road, Hoxton, N.; reinforced floors and staircase, Messrs. Trollope & Colls, Ltd., Coleman-street, E.C.; lifts, Messrs. R. Waygood & Co., Ltd., Falmouth-road, S.E.; Portland stone, the Bath and Portland Stone Firms, Ltd.; bricks, Messrs. Norris, Erith, and the Arlesey Brick Company; marble-work, Art Pavements and Decorations, Ltd., Emerald-street, W.C.; carving, Mr. H. Poole, Chelsea; fibrous plaster, Messrs. Samuel Wright & Co., Ltd., Dalston; asphalt, the French Asphalte Company, Ltd., Laurence Pountney-hill, E.C.; sanitary fittings, Messrs. Dent & Hellyer, Ltd., Red Lion-square, W.C.; pavement lights, Messrs. Hayward Brothers & Eckstein, Ltd., Borough; electric light, Messrs. Duncan, Watson, & Co., Berners-street, W.; heating and hot-water supply, Messrs. James Slater & Co., Ltd., Wells-street, W.; "Simplex" lead glazing, Messrs. Grover & Co., Ltd., Wharf-road, N.

FOREIGN AND COLONIAL.

Furniture and Equipment for Masonic Temple, Toronto.

With reference to the notice on p. 58 of the *Board of Trade Journal* of January 1 relative to a competition of plans for a new Masonic temple at Toronto, the Imperial Trade Correspondent at that city (Mr. F. W. Field) reports that the first premium has been awarded to a New York architect, and that other premiums to Canadian architects. The name of the successful architect, as well as address to which firms interested in Masonic furnishings should send communications, may be obtained by United Kingdom manufacturers on application to the Commercial Intelligence Branch, as above.

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PRICES CURRENT OF MATERIALS.

*** **Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.**

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 16 0
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.	£ s. d.		£ s. d.
Flettons	1 14 0	Best Blue Pressed Staffordshire	3 15 0
Best Fareham Red	3 12 0	Do. Bullnose	4 0 0
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0
GLAZED BRICKS—			
Best White, Ivory, and Salt Glazed Stretchers	12 7 6	Double Headers	14 17 6
		One Side and two Ends	18 17 6
Headers	11 17 6	Two Sides and one End	19 17 6
Quoins, Bullnose and 4½ in. Flats	15 17 6	Splays and Squints	17 7 6
D'ble Str'tch'rs	17 17 6		

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	7 0	per yard, delivered
Thames Ballast	5 9	" "
Best Portland Cement	37 0	per ton, "
Best Ground Blue Lias Lime	20 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 1s 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly. dpt.

STONE.

Per Ft. Cube.	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 7½
Do. do. delivered on road waggons, Nine Elms Depôt	1 9½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 6½

Per Ft. Cube, delivered at Railway Depôt.	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 4
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 8		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	2 10
Scappled random blocks	
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 9
	2 6
6 in. rubbed two sides ditto, ditto	0 11½
2 in. sawn two sides slabs (random sizes)	0 7
2 in. to 2½ in. sawn one side slabs (random sizes)	0 6
1½ in. to 2 in. ditto, ditto	

STONE (Continued).

	£	s.	d.
Giltv York— Per Ft. Cube, Delivered at Railway Depôt.			
Squared random blocks		3	0
Per Ft. Super., Delivered at Railway Depôt.			
4 in. sawn two sides landing to sizes (under 40 ft. super.)		2	8
3 in. rubbed two sides ditto		3	0
4 in. sawn two sides slabs (random sizes)		1	2
2 in. sel-faced random flags		0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£	s.	d.
24 x 12 best blue Imperial	13	2	6
20 x 12 ditto	13	17	6
24 x 12 1st q'lity	13	0	0
20 x 12 ditto	13	15	0
16 x 8 ditto	7	5	0
24 x 12 best blue Portsdoc	12	12	6
16 x 8 ditto	6	12	6

	£	s.	d.
20 x 10 best Eureka unfading green	15	17	6
20 x 12 ditto	16	7	6
18 x 10 ditto	13	5	0
16 x 8 ditto	10	5	0
20 x 10 permanent green	11	12	6
18 x 10 ditto	9	12	6
16 x 8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.
Best plain red roofing (per 1000)	42	0
Hip and Valley (per doz.)	3	7
Best Broseley (per 1000)	50	0
Do. Ornamental (per 1000)	52	6
Hip and Valley (per doz.)	4	0
Best Ruabon red, brown, or brindle (Edw'ds)(per1000)	57	6
Do. Ornamental(per 1000)	60	0
Hip (per doz.)	4	0
Valley(perdoz.)	3	0

	s.	d.
Best "Hartshill" brand, plain sand-faced (per 1000)	45	0
Do. pressed (per 1000)	42	6
Do. Ornamental(per 1000)	47	6
Hip (per doz.)	4	0
Valley(per doz)	3	6
Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Hand-made sand-faced (per1000)	45	0
Hip (per doz.)	4	0
Valley(per doz)	3	6

WOOD.

Building Wood.	At per standard. £	s.	d.		£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	15	0	0	..	16	10	0
Deals: best 3 in. by 9 in.	15	0	0	..	16	0	0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	12	10	0	..	13	10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0		less than 7 in. and 8 in.		
Deals: seconds	1	0	0		less than best		
Battens: seconds	0	10	0		"		
2 in. by 4 in. and 2 in. by 6 in.	11	10	0	..	12	10	0
2 in. by 4½ in. and 2 in. by 5 in.	10	10	0	..	11	10	0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0	10	0		more than battens.		
¾ in.	1	0	0		"		
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5	0	0	..	6	5	0
Seconds	4	10	0	..	5	0	0
Small timber (8 in. to 10 in.)	3	17	6	..	4	0	0
Small timber (6 in. to 8 in.)	3	5	0	..	3	10	0
Swedish balks	2	12	6	..	3	0	0
Pitch-pine timber (30 ft. average)	6	0	0	..	7	0	0

Joiners' Wood.	At per standard. £	s.	d.		£	s.	d.
White Sea: first yellow deals, 3 in. by 11 in.	26	0	0	..	27	0	0
3 in. by 9 in.	24	0	0	..	25	0	0
Battens, 2½ in. and 3 in. by 7 in.	18	10	0	..	19	10	0
Second yellow deals, 3 in. by 11 in.	21	10	0	..	22	10	0
Do. 3 in. by 9 in.	20	0	0	..	21	0	0
Battens, 2½ in. and 3 in. by 7 in.	15	0	0	..	16	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	16	0	0	..	17	0	0
Battens, 2½ in. and 3 in. by 7 in.	14	0	0	..	15	0	0
Petersburg: first yellow deals, 3 in. by 11 in.	23	0	0	..	24	0	0
Do. 3 in. by 9 in.	20	0	0	..	21	0	0
Battens	15	0	0	..	16	0	0
Second yellow deals, 3 in. by 11 in.	17	10	0	..	18	10	0
Do. 3 in. by 9 in.	16	0	0	..	17	0	0
Battens	12	10	0	..	13	10	0
Third yellow deals, 3 in. by 11 in.	14	0	0	..	15	0	0
Do. 3 in. by 9 in.	13	10	0	..	14	10	0
Battens	11	10	0	..	12	10	0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	16	10	0	..	17	10	0
First white deals, 3 in. by 9 in.	14	10	0	..	15	10	0
Battens	13	0	0	..	13	10	0
Second white deals, 3 in. by 11 in.	14	10	0	..	15	10	0
Second white deals, 3 in. by 9 in.	13	0	0	..	14	0	0
Battens	12	0	0	..	12	10	0
Pitch-pine: deals	25	0	0	..	26	10	0
Under 2 in. thick extra	0	10	0	..	1	0	0
Columbian or Oregon Pine, best quality	23	10	0	..	26	0	0
Yellow Pine — First, regular sizes	50	0	0		upwards.		
Oddments	35	0	0		"		
Seconds, regular sizes	36	0	0		"		
Oddments	31	0	0		"		
Kauri Pine—Planks per ft. cube	0	5	6	..	0	6	6
Dantzig and Stettin Oak Logs— Large, per ft. cube	0	3	0	..	0	3	9
Small "	0	2	6	..	0	3	0
Waluscot Oak Logs, per ft. cube	0	7	6	..	0	9	0
Dry Wainscot Oak, per ft. super. as inch	0	0	10	..	0	1	2
¼ in. do. do.	0	0	9	..	0	1	0

WOOD (Continued).

Joiners' Wood (Continued)—	£	s.	d.		£	s.	d.
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0	0	10	..	0	1	3
Selected, Figury, per ft. super. as inch	0	1	6	..	0	2	6
Cuba Mahogany	0	1	4	..	0	2	6
					upwards		
Dry Walnut, American, per ft. super, as inch	0	0	10	..	0	1	2
French "Italian" Walnut	0	0	10	..	0	1	4
Teak, per load (Rangoon or Moulmein)	20	10	0	..	26	0	0
Do., do. (Java)	19	0	0	..	22	10	0
American Whitewood planks, per ft. cube	0	5	6	..	0	6	6
Prepared Flooring, etc.—					Per square.		
1 in. by 7 in. yellow, planed and shot	0	14	6	..	0	18	0
1 in. by 7 in. yellow, planed and matched	0	14	9	..	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	17	6	..	1	3	0
1 in. by 7 in. white, planed and shot	0	14	0	..	0	16	0
1 in. by 7 in. white, planed and matched	0	14	3	..	0	16	6
1¼ in. by 7 in. white, planed and matched	0	16	6	..	0	8	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed boards	0	12	6	..	0	15	0
1 in. by 7 in. " "	0	15	0	..	0	18	6
¾ in. by 7 in. white " "	0	12	0	..	0	14	0
1 in. by 7 in. " "	0	14	6	..	0	16	6

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections	9	0	0	..	10	0	0
Compound Girders, ordinary sections	11	0	0	..	12	0	0
Steel Compound Stanchions	12	0	0	..	13	0	0
Angles, Tees, and Channels, ordinary sections	11	0	0	..	12	0	0
Flitch Plates	11	0	0	..	12	0	0
Cast Iron Columns & Stanchions, including ordinary patterns	8	10	0	..	9	0	0

METALS.

	Per ton, in London. £	s.	d.		£	s.	d.
Iron— Common Bars	9	0	0	..	9	10	0
Staffordshire Crown Bars, good merchant quality	9	5	0	..	9	15	0
Staffordshire "Marked Bars"	11	0	0	..	—		
Mild Steel Bars	9	5	0	..	9	15	0
Hoop Iron, basis price	10	0	0	..	—		
" Galvanised	17	10	0	..	—		

" And upwards, according to size and gauge.

Sheet Iron Black— Ordinary sizes to 20 g.	10	5	0	..	—		
" " 24 g.	11	5	0	..	—		
" " 26 g.	12	15	0	..	—		
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0	..	—		
Ordinary sizes to 22 g. and 24 g.	16	0	0	..	—		
Ordinary sizes to 26 g.	17	0	0	..	—		
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18	10	0	..	—		
" " 22 g. and 24 g.	19	0	0	..	—		
Ordinary sizes to 26 g.	20	10	0	..	—		
Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 8 ft. 20 g.	15	0	0	..	—		
Ordinary sizes, 22 g. and 24 g.	15	5	0	..	—		
Ordinary sizes, 26 g.	16	15	0	..	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0	..	—		
Best Soft Steel Sheets, 22 g. & 24 g.	13	10	0	..	—		
Best Soft Steel Sheets, 26 g.	15	10	0	..	—		
Cut Nails, 3 in. to 6 in.	11	0	0	..	11	10	0

(Under 3 in., usual trade extras.)

LEAD, &c.

	Delivered in London. £	s.	d.		£	s.	d.
Lead—Sheet, English, 4 lb. and up	23	0	0	..	—		
Pipe in coils	23	10	0	..	—		
Soil pipe	26	10	0	..	—		
Compo pipe	26	10	0	..	—		
Zinc—Sheet—	In casks of 10 cwt.						
Vielle Montagne	28	5	0	..	—		
Silesian	28	10	0	..	—		

Zinc, in bundles, 1s. per cwt. extra.

	per lb.						
Copper— Strong Sheet		0	1	1	..	—	
Thin "	"	0	1	2	..	—	
Copper nails	"	0	1	0	..	—	
Copper wire	"	0	1	0	..	—	
Brass— Strong Sheet	"	0	1	0	..	—	
Thin	"	0	1	1	..	—	
Tin—English Ingots	"	0	1	10	..	—	
Solder—Plumbers'	"	0	0	10	..	—	
Tinmen's	"	0	1	1	..	—	
Blowpipe	"	0	1	3	..	—	

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	2d.	32 oz. thirds	5½d.
21 oz. thirds	3½d.	" fourths	4½d.
" fourths	3d.	Fluted Sheet, 15 oz.	3d.
26 oz. thirds	4½d.	" 21 oz.	4d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

¼ Rolled plate	2½d.
⅛ Rough rolled and rough cast plate	2¼d.
⅛ Rough rolled and rough cast plate	3d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
Ditto, tinted	5d.

* Not less than two crates

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	2	2
" " " in barrels	"	0	2	3
" " " in drums	"	0	2	5
Boiled " " in barrels	"	0	2	5
" " " in drums	"	0	2	8
Turpentine in barrels	"	0	2	9
" in drums	"	0	2	11
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		29	15	0
Red Lead, Dry	per ton	28	0	0
Best Linseed Oil Putty	per cwt.	0	9	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	6
French and Brush Polish	0	10	0

TO CORRESPONDENTS.

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*Denotes *accepted*. †Denotes *provisionally accepted*.

BASINGSTOKE.—For erection of generating station, for the Corporation:—
Smallbone & Sons, Streatley* £1,987

BECKENHAM.—For schools at Balgowan-road, for the Urban District Council:—

Hill & Gurr	£20,600	D. Goddan & Sons	£17,137
T. W. Heath & Son	19,190	T. Lowe & Sons	17,136
Jones & Andrews	18,950	R. Cook & Sons	17,130
F. & G. Foster	18,489	Lawrence & Son	16,972
J. Marsland & Sons	18,448	T. Graham & Co.	16,735
Smith & Sons, Ltd.	18,140	W. Moss & Sons, Ltd.	16,400
J. Longley & Co.	17,988	J. Elliman	15,009
Brand, Pettit, & Co.	17,980	Woodham & Sons, Bromley*	14,980
T. Elvins & Sons	17,770		
J. Podger & Sons	17,680		

BISHOP AUCKLAND.—For supply of band stand, for the Urban District Council:—
H. Foster & Son* £216 10

BISHOP AUCKLAND.—For construction of bowling-green, for the Urban District Council:—
Mack & Mills* £378

GOSFORTH.—For making up road between Ilford-road and Rectory-drive, for the Urban District Council:—
J. W. Henderson* £317 17 9

HENDON.—For erection of fifty artisans' dwellings, at Child's Hill, for Hendon Urban District Council. Mr. G. Hornblower, 2, Devonshire-terrace, Portland-place, W.:—

M. J. Allen	£15,232	W. J. King	£11,198
E. Peddle	15,069	W. A. Smyrk	11,147
J. Wright	14,884	O. P. Drever, Ltd.	11,051
W. Tout	11,797	G. E. Galliford	10,980
W. H. Cooper	11,790	W. King & Sons	10,875
Bosworth & Lowe	11,551	J. Guttridge & Son	10,040
T. Bow	11,499	G. H. Gibson & Sons, High Wycombe‡	9,900
Rowley Bros.	11,295		
F. Evans	11,234		

[‡ Recommended for acceptance.]

HIGH WYCOMBE.—For the erection of new Grammar School to accommodate 210 boys. Mr. Arthur Vernon, P.P.S I., architect, 11, Queen Victoria-street, London, E.C., and High Wycombe:—

Fassnidge & Son	£10,730	Y. J. Lovell & Son	£9,963
Franklin, Ltd.	10,730	Holland & Hannen	9,898
Webster & Cannon	10,493	W. Moss & Son	9,833
J. W. Falkner & Son	10,342	W. Lawrence & Son	9,810
G. H. Gibson & Son	10,346	Hunt & Son*	9,533

HIGH WYCOMBE.—For the erection of new master's house and boarding accommodation. Mr. Arthur Vernon, P.P.S.I., architect, 11, Queen Victoria-street, London, E.C., and High Wycombe:—

O. Nash & Son	£4,550	Hunt & Son*	£4,399
Gibson & Son	4,480		

HIGH WYCOMBE.—For the erection of cycle house and workshop at the Grammar School. Mr. Arthur Vernon, P.P.S.I., architect, 11, Queen Victoria-street, London, E.C., and High Wycombe:—

Hunt & Son* £360

HOLSWORTHY.—For erection of five workmen's cottages, for the Urban District Council:—

F. C. Hender, Plymouth* £945

HUNTINGDON.—For reinforced concrete bridge, at Matcham's Turn. Mr. H. Leete, Surveyor, County Offices, Huntingdon:—

Thackray & Co., Huntingdon* £366 17 6

KILMARNOCK.—For reconstruction of the gas-works, for the Town Council:—

Dempster & Sons, Elland* £14,750

LONDON.—For the erection of washhouses, for the Metropolitan Borough of Stoke Newington. Mr. William F. Loveday, Borough Surveyor:—

W. Gladding & Co.	£1,869	J. Garrett & Son	£1,716
F. & F. J. Wood	1,844	Stapleton & Sons	1,642
C. R. Price	1,829	W. Shurmur & Son	1,620
E. Lawrence & Sons	1,799	Harris & Wardrop	1,596
S. Goodall & Son	1,799	A. Monk	1,578
W. H. T. Kelland	1,798	J. Sands	1,562
Patman & Fotheringham	1,783	F. Webster & Son, Grove Vale Works, East Dulwich, S.E.*	1,558
W. M. Dabbs & Son	1,742		

LONDON.—For installation of heating apparatus at County Secondary School, Brockley, for the London County Council:—

Palowkar & Sons	£1,396 0
Brightside Foundry and Engineering Co., Ltd.	1,390 0
J. Cormack & Sons, Ltd.	1,381 10
Arding & Dyne	1,375 15
H. J. Cash & Co.	1,264 0
E. Deane & Beal	1,245 0
J. & F. May	1,221 15
Cannon & Hefford	1,197 0
G. & E. Bradley	1,145 0
W. G. Cannon & Sons, Ltd., 107, London-road, Southwark*	1,138 0

NORWICH.—For extension to boot and shoe factory, for Messrs. J. Southall & Co., Ltd. Messrs. Morgan & Buckingham, F.S.I., A.R.I.B.A., architects and surveyors, Norwich and Diss. Quantities by the architects:—

J. S. Smith & Son	£3,285	T. Gill & Son	£2,897
J. Youngs & Son	3,041	W. J. Hannant*	2,897
T. H. Yelf	2,910		

[All of Norwich.]

OUNDLE.—For additions to Isolation Hospital, for the Rural District Council:—

Hinson	£1,370	Bowman	£1,199
Pettit	1,299	Henson	1,169
Hawkins	1,236	Smith	1,157
Chittham	1,212	Freeman, Oundle*	1,136
Drever	1,204	E. Howes	1,117

PONTEFRACT.—For alterations to bank premises at Pontefract, for Messrs. Barclay & Co., Ltd. Messrs. Garside & Pennington, architects and surveyors, Ropergate, Pontefract:—

H. Gandill, Pontefract* £1,599 12

RICHMOND.—For construction and fixing of floor over large swimming bath. Mr. J. H. Brierley, Surveyor, Town Hall, Richmond:—

Dearing & Co., Ltd.	£615 0 0	A. Clayden	£341 0 6
E. J. Saunders	440 0 0	Hughes & Co., Ltd.	337 0 0
Galbraith Bros., Ltd.	409 5 0	Soole & Son	335 0 0
Dorey & Co.	343 14 6	Speechly & Smith, Richmond*	329 0 0

ROCHESTER.—For repaving part of Maidstone-road, for the Corporation:—

W. Griffiths & Co., Ltd.* £500 14 1

SADDLEWORTH.—For erection of new school at Friezland, for the Education Committee:—

Building: Brooke & Holroyd, Marsden*	£2,175 0 0
Joinering: Wilson & Roberts*	720 0 0
Slating: J. Dodson & Sons, York*	234 17 0
Plumbing: S. Rushworth, Shipley*	307 0 0
Plastering: J. Wimpenny, Linthwaite*	220 17 8
Painting: J. J. Hamilton, Bradford*	58 18 1
Ironmongery: J. E. Batley, Wakefield*	169 16 0
Asphalting: J. Brooks, Armley, Leeds*	185 7 0

ST. AUSTELL.—For alterations at Infirmary and erection of mortuary, for the Board of Guardians:—

Paynter* { Workhouse £3,637 6
Mortuary 128 0

ST. IVES.—For alterations at workhouse, for the Board of Guardians:—

E. A. Mason, St. Ives* £108 5

ST. NEOTS.—For new seed warehouse, for Messrs. Jordan & Addington. Mr. E. J. Gairdner, architect, Effingham House, Arundel-street, Strand. Quantities by Messrs. Fleetwood, Eversden, & King, 3, New-court, Lincoln's Inn:—

F. B. Thackray & Co.	£3,750 0	S. Redhouse & Son	£2,396 0
R. S. Jellings	2,549 10	A. J. Bateman	2,327 0
M. J. Allen	2,405 0	T. Sobey	2,303 0
J. Willmott & Sons	2,444 0	G. Wrycroft & Sons*	2,190 0
Mattock Bros.	2,411 0		

SEVENOAKS.—For surface-water sewering, for the Urban District Council:—

Streeter Bros., Croydon* £829

SHEFFIELD.—For erection of fifty-nine houses, for the Corporation:—

A. Waddington, Sheffield* £10,146

SOUTHAMPTON.—For making up Charlton-road. Mr. J. A. Crowther, Borough Engineer, Town Hall, Southampton:—

J. Douglas	£1,048	J. Nichol*	£1,027
F. Osman & Co.	1,029		

STOCKTON.—For 10-ton steam roller, for the Corporation:—

Clayton & Shuttleworth* £477 10

SWINDON.—For construction of foundations, etc., for plant at electricity works, for the Town Council:—

Building and Public Works Construction Co.* £1,313 2 8

WALPOLE (Norfolk).—For the erection of two cottages and farm buildings, for Messrs. E. H. & N. Clarke, 51, St. James Market, Bradford. Mr. Edwin A. Walker, architect, 44, Market-place, Wisbech. Quantities by the architect:—

J. J. Bone	£1,097 10 0	Sleight & Morton	£862 10 0
G. J. West	897 10 0	H. W. Reeder, Terrington St. John, near Wisbech*	815 6 0
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